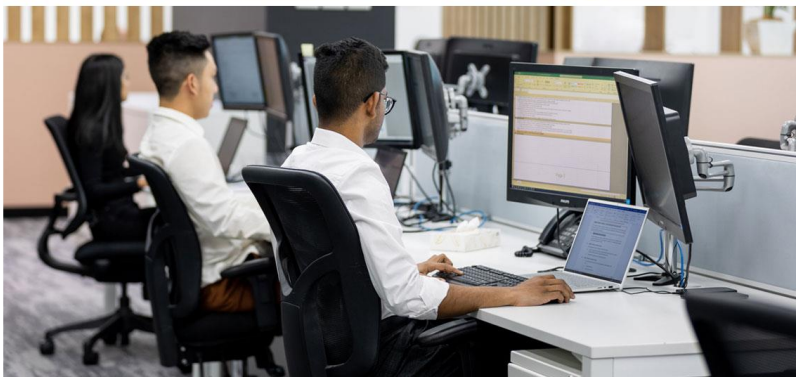
ORION

Construction Environmental Management Plan

For Bradfield City Centre – Stormwater Infrastructure, Sediment Basins, Wetlands, and Ponds



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Prepared for Western Parkland City Authority

Western Parkland City Authority

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Document Control

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1 INTRODUCTION

1.1 Overview

Orion Group (Orion) has been engaged by the Western Parkland City Authority to prepare this Construction Environmental Management Plan (CEMP) to accompany the Review of Environmental Factors (REF) submission for Bradfield City Centre new wetlands, bioretention basins and retention ponds at Moore Gully and Thompsons Creek.

This CEMP will address the matters arising from the construction activities associated with the construction of new wetlands, bioretention basins, and retention ponds at Moore Gully and Thompsons Creek. The Plan describes how the Contractor is to manage the potential risks and impacts during construction.

The CEMP ensures that:

- Relevant environmental risks are identified, and appropriate safeguards and controls implemented on site.
- Adverse impacts on the environment are minimised.
- Conservation measures of the Project's sensitive features in the surrounding environment is in place.
- Suitable emergency preparedness and response procedures are implemented.
- Details of complaints management procedures are documented appropriately.
- Environmental and social impacts are monitored and managed through appropriate measures and relevant legislation.

The following documents are referenced in this CEMP in support of this document's intention:

- Appendix A – Flooding Impact Assessment Report
- Appendix B – Biodiversity Strategy and Impact Assessment Report
- Appendix C – Air Quality Impact Assessment Report
- Appendix D – Noise and Vibration Impact Assessment Report
- Appendix E – Statement of Heritage Impact Report
- Appendix F – Aboriginal Engagement Outcomes Report
- Appendix G – Earthworks Report
- Appendix H – Bushfire Strategy and Impact Assessment Report
- Appendix I –
    - (a) - Contamination Report (Site Audit Report)
    - (b) - Contamination Report (Site Audit Statement)
- Appendix J – Department of Housing's Managing Urban Stormwater Soils and Construction
- Appendix K – Planning Report

Site works require careful management of excavation, demolition, and construction to ensure that adequate levels of amenity are preserved for the community and other stakeholders. The Construction Environmental Management Plan (CEMP) is required to minimise the impacts on:

- Neighbours;
- Nearby residents;
- Users of public footpaths, roads, bike paths and reserves;
- Traffic flow within the surrounding street network;

- Public parking within the vicinity of the site;
- The environment, including trees and vegetation on and surrounding a development site; and
- Fauna (and fauna habitat) protection, recovery, and relocation.

To achieve this, the CEMP shall address the following matters:

- Noise associated with machinery;
- Noise associated with voices/workers/radios;
- Airborne dust;
- Sediment-laden and/or contaminated runoff along roads, drains, and footpaths;
- The effectiveness of wash bays regarding trucks tracking mud sediment out onto roads;
- Damage to public assets such as roads, laneways, footpaths, and road reserves;
- Construction waste on public land (road reserves, footpaths, laneways);
- On-site waste, rubbish and debris, unsightly suites, and toilets;
- Vermin associated with on-site building waste;
- Impact of lane closures on access for other road users;
- Impact of contractor's vehicles on parking on existing road networks including illegal parking;
- The impact of heavy vehicle movements to and from development sites; and
- Construction hours.

1.2 Purpose of this Plan

This CEMP outlines the project-specific management requirement. It combines the quality, safety, and environmental requirements for the project in one document.

The works incorporated include bulk excavation, construction of drainage, spillways and embankments, construction of wetlands, sediment basins, and ponds, and vegetation and maintenance.

Provision of principal management and supervision, labour, materials, plant, equipment, WHS, insurances, and accessories to complete civil & associated works, in accordance with drawings and specifications will be undertaken by the Principal Contractor.

This Construction Environmental Management Plan is applicable to all staff, employees, subcontractors, and any statutory Service Authorities undertaking service relocations throughout the duration of the contract until project completion and its implementation and on-going development will be managed by the senior project team.

1.3 Project Objectives

The project objectives include:

- Earthworks to create ponds, basins, and wetlands;
- Construction of drainage infrastructure;
- Construction of retaining walls;
- Construction of spillways and embankments;

- Planting and re-vegetation;
- Flood mitigation and stormwater engineering works.

1.4 Key Contact Details

Key contact details shall be erected on the perimeter of the construction site (i.e. attached to the building, fence or hoarding) and the signage should generally indicate the following information:

Project details

Principal Contractor Details:……

Directors Name:……

Company Name:……

Company Business Address:……

Company Contact:……

Contact details of person responsible for compliance with CEMP

Phone Number:……

Name:……

Contact Number:……

After Hours Contact Number:……

Contact person in control of site

Name:……

Contact Number:……

After Hours Contact Number:……

2 THE SITE AND LOCALITY

2.1 Site Location

The subject site is located within the suburb of Bradfield, approximately 5 kilometres south-east of the Western Sydney International Airport and within the Aerotropolis Core Precinct. The REF extent of works is 17.6 hectares in size.

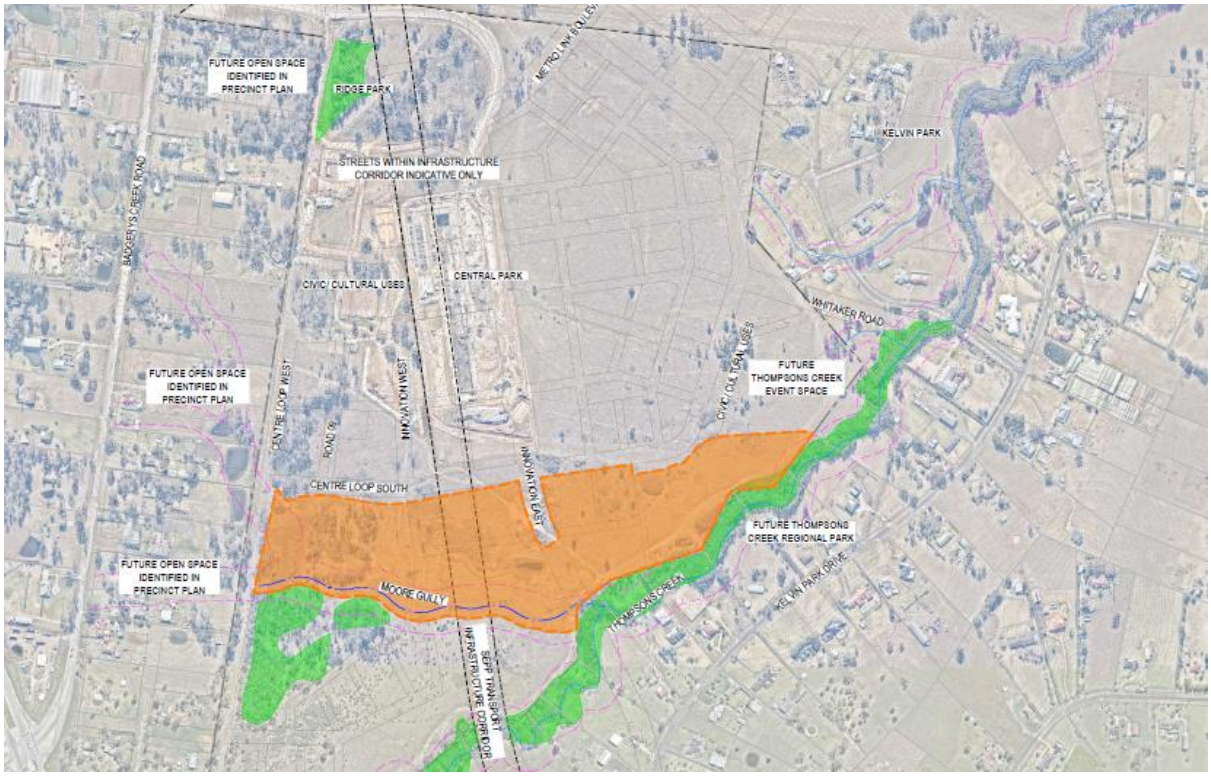
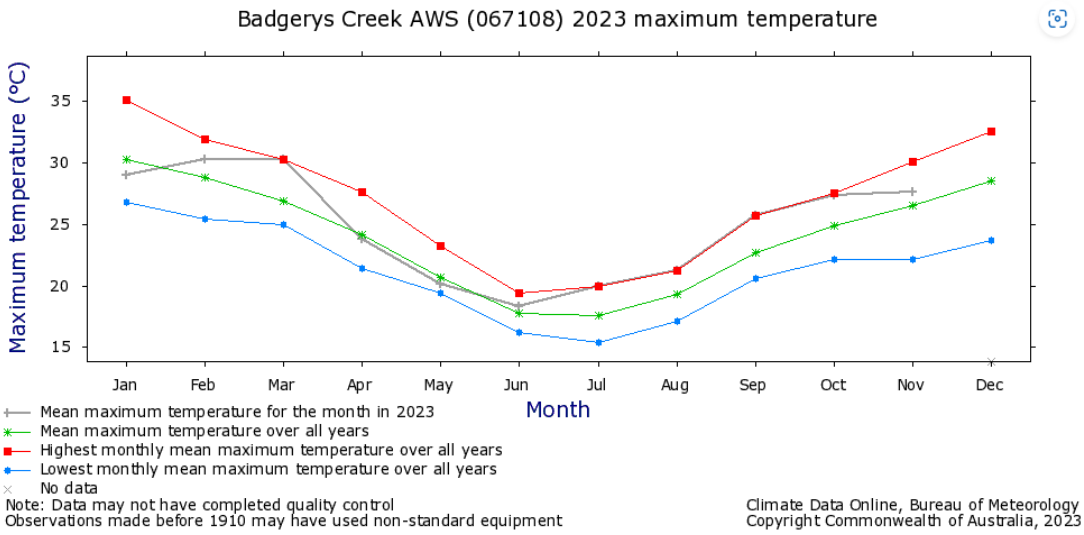


Figure 1: REF Extent of Works (orange), 215 Badgerys Creek Road, Bradfield NSW 2556

2.2 Badgerys Creek Weather

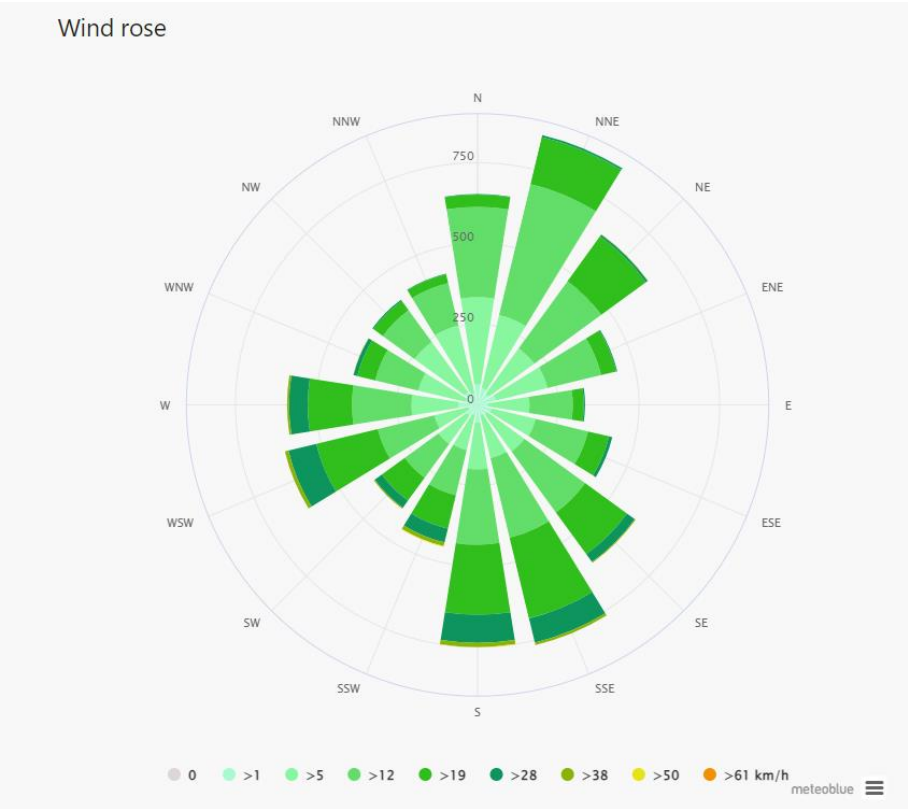
The maximum temperature in Badgerys Creek for all years (to 2023) is plotted in Figure 2. "mean maximum temperature over all years" (solid green line) shows the average maximum temperature for every month for Badgerys Creek AWS. The "mean maximum temperature for the month in 2023" (solid grey line) shows the average maximum temperature for every month of 2023 for Badgerys Creek AWS. The highest monthly and lowest monthly mean temperatures over all years are shown by the solid red and blue lines respectively. The data used ranges from 1995-2023.



Source: BoM

Figure 2: Temperature Summary Statistics for all years of the Badgerys Creek AWS area

The wind rose for Bringelly is shown in Figure 3. This shows how many hours per year the wind blows from the indicated directions. Wind is predominantly blowing from the SSE and the NNE, however reasonable spread is recorded from all directions.



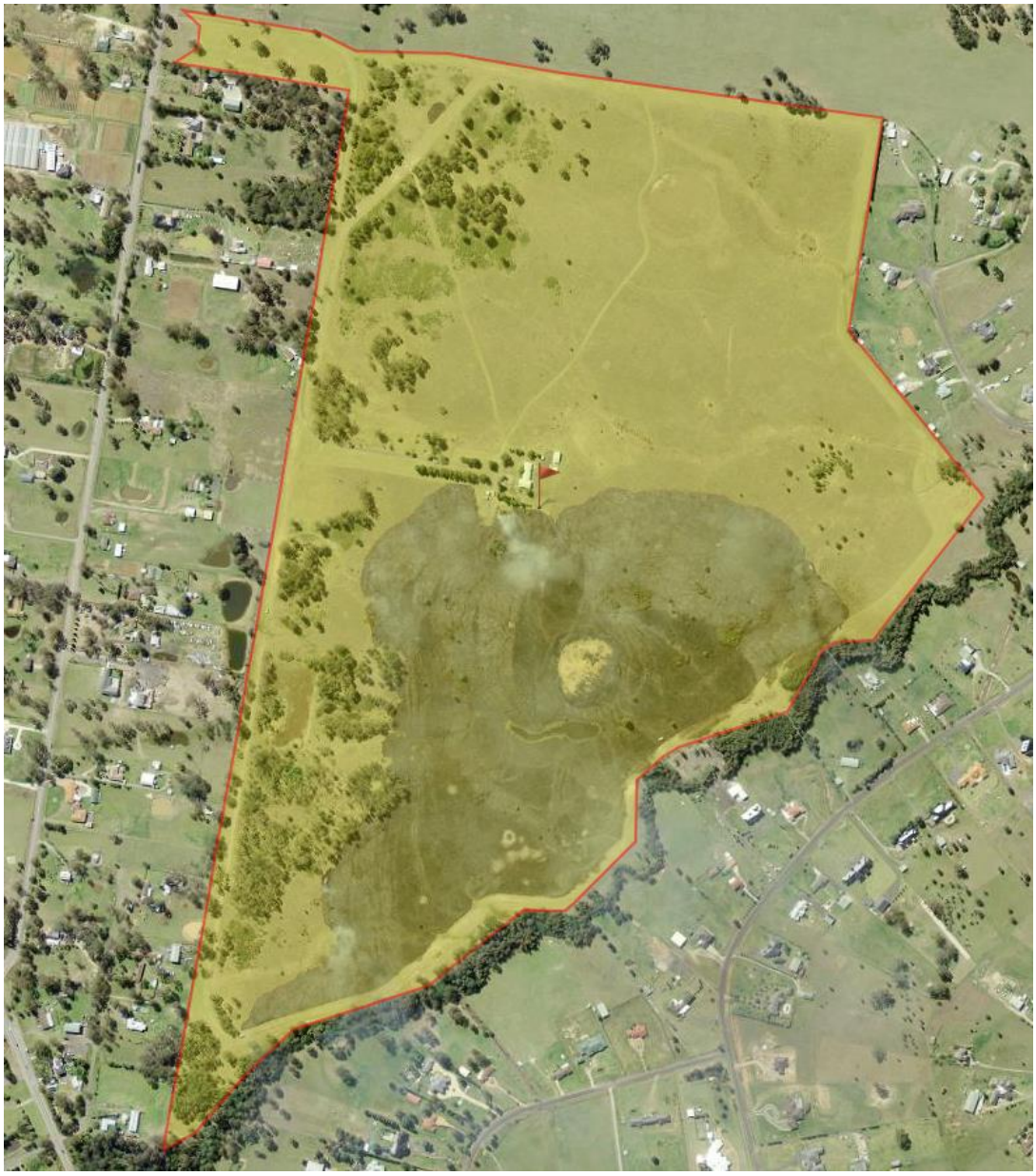
Source: www.meteoblue.com

Figure 3: Wind rose for the Bringelly Area

2.3 Site Description

The subject site is located within the suburb of Bradfield, being legally defined as Lot 3101/DP 1282964 as illustrated in Figure 4.

The site is located on the east side of Badgerys Creek Road, Bradfield at number 215 Badgerys Creek Road, Bradfield NSW 2556 as shown in Figure 5 below. In its existing state, the subject site is made up of vegetated land with construction of the Aerotropolis Station underway.



Source: Sixmaps

Figure 4: Aerial View of the Lot Area

Source: Metromap

Figure 5: Aerial View of the Approximate Site Area (not survey)

This CEMP will address the works as part of the submission for a REF regarding the proposed wetlands, bioretention basins, and retention ponds abutting Moore Gully and Thompsons Creek. The works will support the master development known as Bradfield City Centre. The anticipated earthworks have been outlined in the earthworks report. See Figure 6 below.

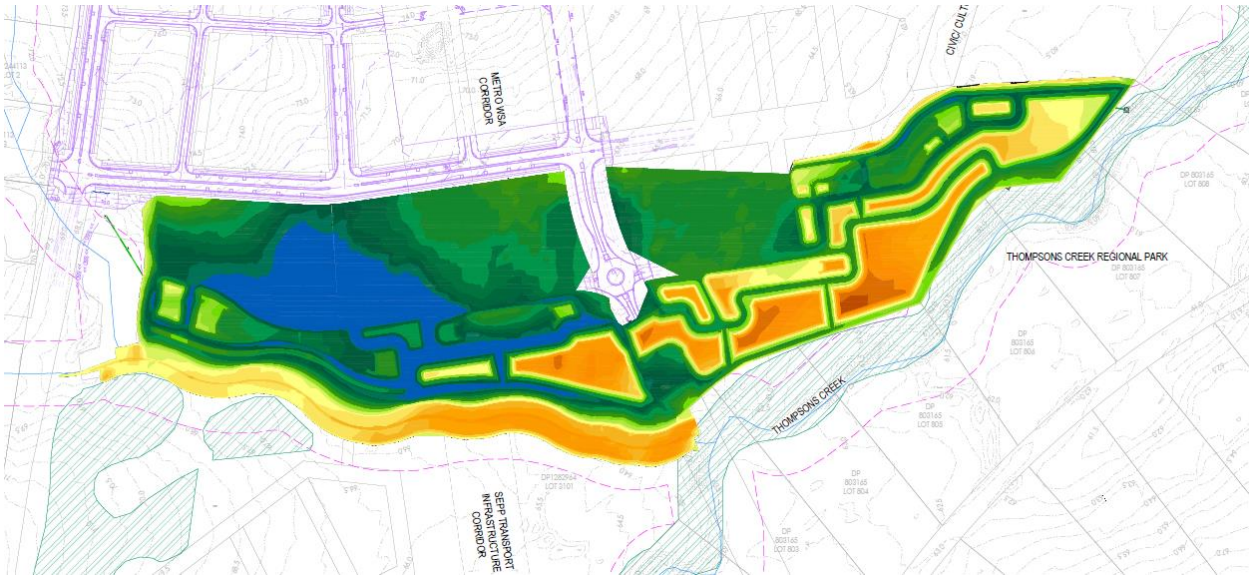


Figure 6: Cut and Fill Plan (Stormwater Truck Infrastructure, Sediment Basins, Wetlands and Ponds Design, Stantec, September 2023)

3 RESPONSIBILITY AND AUTHORITY

3.1 Organisation Structure

The organisational structure for the Principal Contractor's management of the project is listed below:

3.1.1 Project Manager

The Project Manager is responsible for WHSE at the workplace. Their duties include:

- Implementing the WHSE Management Plan/Integrated Management System (IMS), and CEMP;
- Using the Hierarchy of Controls in all design, fabrication, and construction activities to minimise WHSE risks;
- Being involved in the planning and design stages of activities;
- Deciding when training on WHSE is required;
- Leading by example and promoting sound WHSE practices at every opportunity;
- Ensuring safe equipment and plant are provided and maintained;
- Reviewing WHSE reports and inspections, and following up on recommendations;
- Coordinating incident investigations and reporting to the controller of the workplace and relevant authorities, as required;
- Coordinating WHSE meetings and programs;
- Monitoring compliance with the WHSE Management Plan/IMS, including Safe Work Method Statements;
- Assisting injured workers to return to their pre-injury duties as soon as practicable after a work-related injury; and
- Ensure all environmental controls are in place and are being monitored.

3.1.2 Site Supervisor

The project Site Supervisor is responsible for WHSE at the workplace and duties include:

- Implementing the WHSE Management Plan and CEMP;
- Observing all WHSE rules and regulations;
- Assisting with ensuring activities are carried out in a safe and environmentally sound manner;
- Planning to do all work safely including any interface with other work activities;
- Providing advice and assistance on WHSE matters to contractors;
- Being involved in the planning and design stages of trade activities;
- Deciding when training on WHSE is required;
- Actioning WHSE reports and carrying out workplace inspections;
- Setting up WHSE meetings and programs;
- Ensuring the implementation and review of Safe Work Method Statements for the organization's work activities;
- Investigating hazard reports and ensuring that they are completed, and corrective actions undertaken;
- Carrying out project toolboxes, inductions and team meetings;
- Being involved in and monitoring incident investigations and their close-out;
- Leading by example and promoting sound WHSE practices at every opportunity;
- Undertaking inspection of the contracted or planned works to ensure that WHSE control measures are implemented and effective;
- Other WHSE duties as directed by the Works Manager;
- Ensure all environmental controls are in place and are being monitored;
- Ensure approved TCPs are implemented and compliant with authority requirements;
- Issues the required TCPs and, where relevant road occupancy approvals and speed zone authorisations to the contractor / or subcontractor; and
- Ensures adequate plant, equipment, and human resources are made available for the installation and maintenance of temporary control devices.

3.1.3 Site Manager

The Site Manager is responsible for WHSE at the workplace and duties include:

- Implementing the WHSE Management Plan and CEMP;
- Observing all WHSE rules and regulations;
- Making sure that work activities are carried out in a safe and environmentally sound manner;
- Manage installation of appropriate environmental controls;
- Manage the ongoing monitoring, site inspection and rectification requirements following any non-conformance of the requirement of this CEMP;
- Ensure work is being carried out in accordance with requirements and Issues formal instructions for preventative and corrective actions where required;
- Responsible for training and enforcing emergency procedures at the workplace;
- Responsible for notifying and reporting incidents and near misses at the workplace in a timely manner;
- Responsible for the day to day management of tasks and activities; and
- Must ensure that all consents and permits are in place before works commence.

3.1.4 Site Engineer

The Site Engineer is responsible for WHSE at the workplace and duties include:

- Implementing the WHSE Management Plan and CEMP;
- Observing all WHSE rules and regulations;
- Assisting the Site Supervisor in day to day tasks and activities;
- Assist in the management of personnel at the workplace;
- Manage the site inductions daily;

- Enforce safety requirements at the workplace;
- Ensure that complaints are properly investigated and resolved in a timely manner;
- Assist the Project Manager with stakeholder management;
- Conduct internal WHSE site audits and exceed the acceptable minimum performance targets for safety and environmental factors;
- Manage and conduct quality control inspections and reports throughout the project; and
- Manage document control and verify the distribution of documentation.

3.1.5 WHSE Officer

The WHSE Officer is responsible for WHSE at the workplace and duties include:

- Communicating WHSE performance to the Site Manager;
- Assisting the Site Manager to develop and implement the WHSE Plan;
- Providing advice on WHSE to all workers;
- Being a part of planning and design in work activities;
- Determining WHSE legal requirements for the work activity or trade;
- Making sure WHSE work procedures are followed;
- Reviewing WHSE reports and inspections;
- Setting up Toolbox Talks on a regular basis;
- Insisting on sound WHSE practices at all times;
- Setting up and conducting WHSE inductions;
- Communicating with the Works Manager/Works Supervisor on WHSE matters;
- Making sure records are kept under these guidelines;
- Being part of inspections and ensuring recommendations are completed;
- Other WHSE duties as directed by the Works Manager; and
- Monitor environmental controls for compliance.

3.1.6 Functional Personnel

All other employees are responsible for the following:

- Working in a safe manner without risk to themselves, others or the environment;
- Complying with the WHSE Management Plan/IMS including all Safe Work Method Statements;
- Reporting all incidents to the Site Supervisor;
- Reporting all injuries and illnesses to the designated First Aid Officer;
- Reporting any WHSE hazards to the Site Supervisor;
- Providing suggestion, through agreed consultation methods, on how to improve WHSE issues;
- Seeking assistance if unsure of WHSE rules;
- Reporting any faulty tools or plant to the Site Supervisor;
- Complying with site rules;
- Correctly using all personal protective equipment;
- Complying with emergency and evacuation procedures;
- Ensure environmental controls are being used to protect the environment; and
- Complying with the WHSE Management Plan/IMS/CEMP including all Safe Work Method Statements

3.2 Communication

The Project Manager is the primary contact for all environmental issues and emergencies. In the absence of the Project Manager, the Site Supervisor is the initial point of contact for the project team members (or as defined by the Contractor in the relevant project management plan).

The Site Supervisor is the designated 24-hour emergency contact for government and emergency authorities. The Site Supervisor has the authority to take or direct required action on site and have the authority to stop works if necessary. They will also be responsible to advise and keep informed all affected and relevant property owners, government authorities and other parties (where applicable) of the project activities. This may include letterbox drops or door knocks as appropriate.

3.3 Meetings

The Project Manager or designee will initiate, schedule, chair, and minute the various meetings to coordinate the progress efficiently and effectively. The meetings typically held during implementation are:

- Pre-construction meeting;
- Project kick-off meeting;
- Coordination meetings (as needed);
- Special meetings;
- Weekly progress meetings; and
- Environmental meetings.

Additional construction and project control meetings for the benefit of the Principal and their agents will be chaired and recorded by the Principal's Representative.

3.3.1 Meeting Agenda

The Project Manager or designee shall prepare a formal agenda in advance of meetings and distribute it before the meeting. At the end of a meeting, the agenda shall be reviewed to ensure that all topics are covered. Additional topics to be discussed during the meeting will be added to the agenda, usually at the end, and discussed at that time.

3.3.2 Project Meetings

Effective project meetings are essential for transmitting and exchanging key project information between all parties in a timely manner. It is important that:

- Meetings start on time.
- Before starting meetings, attendees shall sign an attendance sheet for record purposes.

Meeting minutes shall be taken and prepared by Project Manager or designee for every meeting and distributed to all attendees and parties not in attendance but involved with the material covered at the meeting. Minutes will be distributed within three (3) working days of the subject meeting.

3.3.3 Monthly Progress Report

The Project Manager shall prepare detailed Monthly Progress Reports to be submitted to the Owner for review and further use. The monthly report shall be submitted on or before the 5th working day of the following month. As a minimum, the monthly progress reports shall include the following information:

- Environmental quality issues and proposed rectification works;
- Environmental concerns;
- Monthly progress and status of the works (including Executive Summary);

- Description of problem areas;
- Current or anticipated causes of delay along with estimated impact on progress and corrective actions to taken or proposed;
- List of completed activities;
- List of current and upcoming activities with an estimate of time required for completion;
- Percentage of completion of each current activity;
- List of any design changes or modifications; and
- Other information, as may be required.

3.3.4 Progress Photographs

The Site Supervisor is responsible for taking construction photographs at regular intervals to include in the Monthly Progress Report.

The Site Engineer shall also be responsible for photo-documenting construction works to provide time-stamped evidence of environmental controls.

3.4 Working Hours

The working hours will be compliant with the works consent approval. However, it is recommended that works are restricted to between the hours of:

- 7.00am and 6.00pm, Monday to Friday;
- 7am and 1pm Saturday (if inaudible on neighbouring residential properties)
- The contractor must instruct sub-contractors regarding the hours of work.

Consent to undertake construction and/deliveries outside of the times stated above must be obtained in writing from the certifying authority. This request must be made at least 10 days prior to the intended event. Notice must also be sent to affected parties to ensure they are aware of the intended activities.

4 MATTERS TO BE CONSIDERED

4.1 Public Safety and Amenity

Public safety and the protection of amenities are paramount to ensure that the neighbours, the broader public, and various stakeholders are protected from activities associated with the development phase of the site. The contractor is required to consider strategies to provide a safe and secure job site and ensure that public safety and amenity is suitably maintained.

Basic principles such as a construction site being kept neat and tidy should be adhered to at all times. Consultation should be undertaken with the relevant stakeholders to determine what (if any) impact will occur in relation to matters such as rubbish/waste collection services and safe vehicle movements to and from the site and in and around the surrounding street network.

In some instances, further consents are required to be obtained as follows:

- Permit for a vehicular crossing (permanent or temporary);
- Permit to occupy space on road or footpath;

- Permit to erect a hoarding (where it occupies Council space outside of a building site whilst construction work is undertaken);
- Permit for a road closure;
- Permit for a construction zone; and
- Permit for legal point(s) of storm water discharge.

4.2 Protection of Public Assets

The Contractor shall prevent potential damage to Council assets (streets, footpaths, laneways, and reserves) and:

- Protect public infrastructure assets from damage caused by construction work;
- Protect the health and safety of persons who work in or enter construction sites;
- Protect the health and safety of persons who reside near or pass by construction sites; and
- Provide for the peace, order and good governance of the municipality.

In effect, the Contractor must not commence, allow or authorise anyone else to commence construction work on the subject land unless notice is given the certifying authority in accordance with the Consent. The notice must be given to the authority no less than 2 days before the construction work commences.

Any damage to the footpath, road, kerb and channel, stormwater drains, and street furniture that results from excavation, demolition, and construction work is the responsibility of the Contractor. Any damage which may impact on pedestrians, cyclists and motorists' safety must be repaired immediately.

The Contractor must manage and maintain the existing vehicular access to be used for the course of the works. Should any alternative access be required, the Contractor must apply for a new vehicular crossover or modification/alteration to an existing crossover proposal for assessment and approval by the certifying authority.

4.3 Construction Waste on Public Land

The contractor must undertake construction work to:

- Not allow the discharge of construction refuse from the construction site;
- Not damage public infrastructure assets;
- Not, without a permit, place any materials, vehicles, structures, plant, or equipment associated with the construction work on Public-controlled land;
- Provide a facility or facilities of sufficient size and design on the construction site for the storage of refuse until it is disposed of;
- Regularly empty the facility or facilities referred to so as not to cause a build-up of refuse and, without limitation, within 7 days of completion of the construction work;

A skip or large waste bin is to be placed within the site extent, bunded and away from environmentally sensitive areas.

4.4 Onsite Construction Waste

The Contractor shall enforce the Waste Management Plan prepared for works at site to ensure that local amenity is duly protected. Best practice is to ensure that there is minimum dumping of loose materials on a site. These measures must be effective when the site is unattended.

Materials stored on the site must be adequately secured to prevent unnecessary and unsightly dispersal of the materials around the site and public areas (streets, laneways, footpaths and reserves).

4.5 Removal of Hazardous Material

Removal of hazardous or dangerous materials from the site must be in accordance with the requirements of the EPA Act. State and Federal legislation including WorkSafe requirements must also be adhered to.

5 PROJECT ENVIRONMENTAL AND ECOLOGICAL MANAGEMENT

5.1 Introduction

The potential sources of environmental risk during construction of the project are likely to include the effects of earthworks, stockpiling of materials, and construction traffic movement on the work site. The activities associated with environmental risk include:

- Clearing of vegetation;
- Earthworks;
- Transport of spoil and construction materials;
- Stockpiling; and
- Plant and vehicle movements on site.

5.2 Environmental Risk Assessment

The following points summarise the key activities identified in the risk assessment that present a risk to local air quality during the 4 stages of construction works. It should be noted that risks do not consider occupational exposure to construction workers.

- Movement of plant and equipment on the Project site (including survey vehicles, drilling rigs, excavators);
- Clearing and grubbing;
- Establishment of site sheds and facilities;
- Installation of boundary fencing;
- Installation of sediment and erosion controls;
- Earthworks; and
- Pavement construction and local road upgrade works.

Activity / Hazard	Frequency	Consequence	Risk
Movement of plant and equipment on the Project site	5	3	**High**
Earthworks	5	3	**High**

Pavement construction and local road upgrade works	4	3	**High**
Installation of boundary fencing	3	2	**Moderate**
Installation of sediment and erosion controls	3	2	**Moderate**
Clearing and grubbing	3	2	**Moderate**
Establishment of site sheds and facilities	2	2	**Low**

Table 1: Risk Assessment of Site Activities

The Contractor shall perform a detailed assessment before the commencement of Works onsite.

5.3 Environmental and Ecological Controls

5.3.1 Neighbour Notification and Engagement

Objective:

The objective is to maintain healthy relationships with all neighbouring residents throughout the construction process to minimise the risk of delays to the project and ensure project delivery within the agreed time frames.

Control Measures:

The following measures should be undertaken to manage stakeholder relationships:

- Notification letters with the contractors' Site Supervisor detail should be delivered before commencement of works to neighbouring residents within 500 metres of the works area;
- Project updates to be issued to neighbouring residents advising timing of delivery and any potential delays to project completion; and
- The Contractor shall endorse the opportunity for neighbouring residents to voice valid concerns over any aspect of the project. Valid concerns raised by any party will be reviewed and addressed appropriately in consultation with the party who raised the concern.

5.3.2 Native Vegetation and Threatened Ecological Communities (TECs)

Objective:

To maintain and protect the existing Native vegetation, TECs, and Identified Environmental Protection Areas from damage, contamination, or threat and avoid, mitigate, and offset impacts to ecological values.

Control Measures:

The following measures should be undertaken to manage Native Vegetation:

- The Contractor shall comply with the guidelines set out in Appendix B: “20230913 Biodiversity Strategy and Impact Assessment” Section 7, Table 17 Recommendations
- Identify the locations where TECs and Native Vegetation to be retained are and establish No-Go/Keep out Zones.
- Install appropriate exclusion fencing to the boundary of the TECs and any construction areas where there is some potential for accidental encroachment. Include appropriate signage such as No-Go Zones, or Environmental Protection Areas
- Ensure appropriate sediment control measures are put in place to ensure run-off during construction does not result in indirect impacts to native plant communities and TECs.

5.3.3 Sediment Control

Objective:

The objective is to protect open drains and natural drainage lines from sedimentation deposits by minimising erosion of lands and transportation of sediments during construction. It is also imperative that stormwater flows are controlled and diverted around operational works during construction for the safety of workers and to minimise flow through disturbed areas.

Control Measures:

The following measures should be undertaken to manage sediment control:

- Temporary drains and swales designed and constructed to divert flows around active construction areas;
- Set up silt traps to stop sediment laden rainwater going into drains. When sediment traps are up to 1/3 full of silt, the silt should be removed;
- All sediment laden water is not to be discharged off site;
- Keep exposed soil to a minimum;
- Avoid disturbing highly erodible soils and steep slopes;
- Divert clean stormwater by small levees away from those parts of site where the soil is exposed;
- Cover stockpiles as soon as practicable;
- Where/when practicable, all trenches should be backfilled at the end of the working day;
- Construction Plant and machinery are to remain within the construction site for the duration of the project. If they are required to leave site, they should leave over the rumble grid and should be washed down before leaving.
- All drainage channels carrying stormwater runoff are to be stabilised as per the approved design; and
- Works that require the use of dirty water or works that could contaminate water should drain the water away from water sources. Temporary work actions should occur on the opposite side of the site (e.g. refuelling) in a bunded area to ensure that no hazardous materials escape into the site and the local environment.

5.3.4 Erosion & Dust Control

Objective:

To minimise/avoid the health risks or loss of amenity due to the emission of dust to the environment and the loss of soil from the environment.

Control Measures:

The following measures should be undertaken to minimise erosion and dust:

- Comply with the guidelines set out in Appendix J: Department of Housing's 'Managing Urban Stormwater: Soils and Construction - Volume 1' 2004 (Blue Book)
- Ensure that the area of cleared land is minimised;
- Implement dust suppression measures such as promptly watering exposed areas when visible dust is observed and maintenance of perimeter sprinkler systems;
- Use geotextile fabrics to cover stockpiles and unvegetated/disturbed areas;
- Locate stockpiles where they are protected from wind;
- Minimise the number of stockpiles, the areas, and the time stockpiles are exposed;
- All sediment laden water is not to be discharged off the site.

5.3.5 Weed Control

Objective:

To minimise and prevent biosecurity impacts related to weeds existing, or potentially introduced from future development, with risk to threaten existing species.

Control Measures:

The following measures should be undertaken to manage and control Weeds:

- The Contractor shall comply with the guidelines set out in Appendix B: "20230913 Biodiversity Strategy and Impact Assessment" Section 7, Table 17 Recommendations.
- A pre-clearance assessment may need to be undertaken to identify potential weed material and recommend appropriate treatment/disposal measures.
- The contractor is to provide the Principal and the principal's Representative with a seed mix proposal for approval a minimum of 10 business days prior to any hand, hydro, or mechanical seeding of temporary or permanent earthworks, or the project area.
- The contractor is responsible for immediately notifying the Principal and the Principal's Representative of any noxious or harmful weeds that are identified while completing or surveying the works.
- The contractor must dispose/treat of all weed materials appropriately as directed by the relevant project environmental consultant.

5.3.6 Hollow-Bearing Tree Management

Objective:

To appropriately manage the removal or protection of existing and identified hollow-bearing trees within the extent of the project works.

Control Measures:

The following measures should be undertaken to manage and control Weeds:

- The Contractor shall comply with the guidelines set out in Appendix B: "20230913 Biodiversity Strategy and Impact Assessment"
- Refer to Figure 7 for locations of all identified hollow-bearing Trees as a part of the above-mentioned biodiversity assessment report. No hollow-bearing trees are anticipated to be encountered during the construction works of the wetlands, basins, and ponds. If further investigation or survey identifies a hollow-bearing tree within the works area, the contractor is to immediately notify the Principal and the Principal's Representative and follow the recommendations and requirements provided by the project environmental consultant, and the recommendations identified in items 11, 12 and 13 of Table 17 of the above-mentioned biodiversity assessment report.

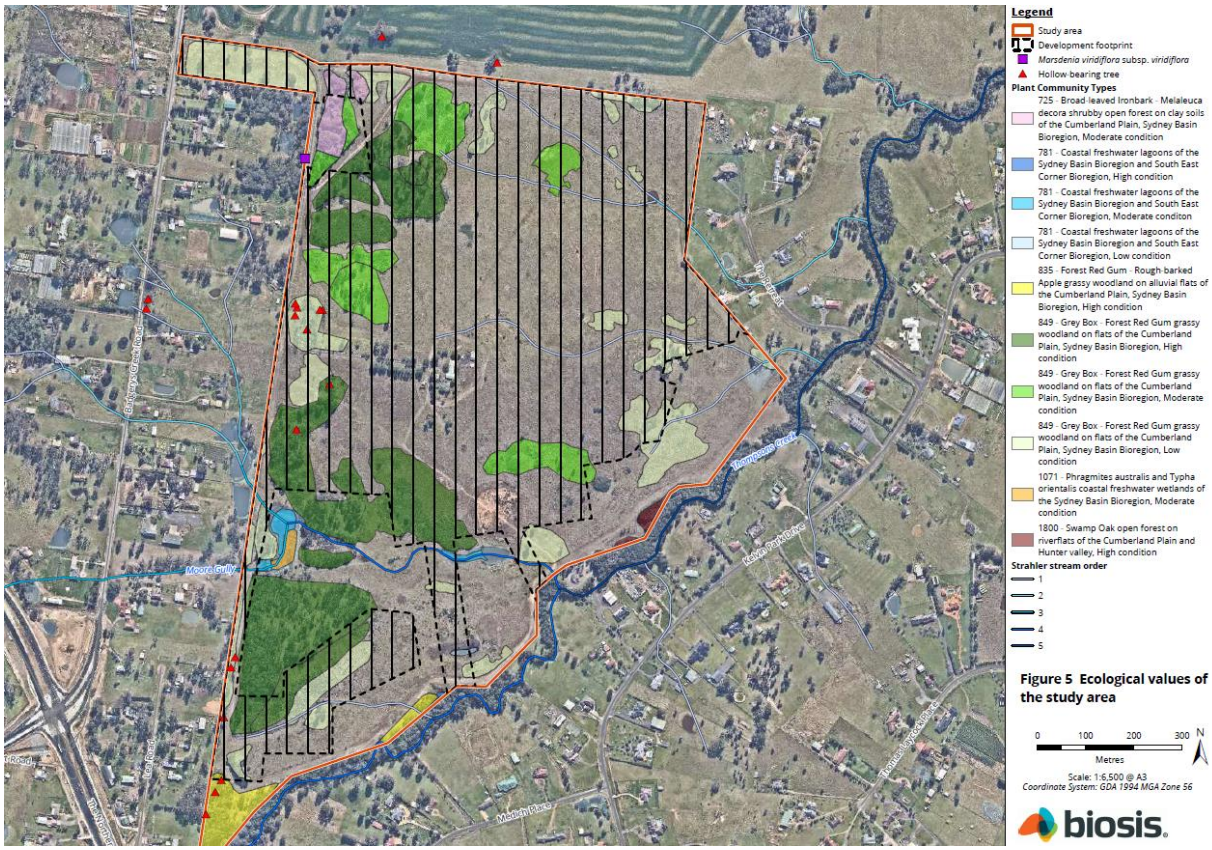


Figure 6: Ecological values of the study area (Appendix B, "20230913 Biodiversity Strategy and Impact Assessment")

5.3.7 Watercourses and Riparian Corridors Management

Objective:

To appropriately manage the re-construction, adjustment or protection of existing and identified watercourses and Riparian Corridors within the extent of the project.

Control Measures:

The following measures should be undertaken to manage and control Weeds:

- The Contractor shall comply with the guidelines set out in Appendix B: "20230913 Biodiversity Strategy and Impact Assessment"
- Comply with the project's approved erosion and sediment control plan.
- Ensure appropriate sediment control measures are installed and inspected/maintained regularly to ensure run-off during construction does not result in indirect impacts to the watercourse.
- Where possible, re-use water collected on-site for the purposes of dust control to prevent discharging from site.
- Ensure water quality testing is conducted and authority approval is obtained for any water that is to be discharged off-site.
- Ensure that No-Go zones are identified and implemented to protect any retained sections of Riparian corridors.

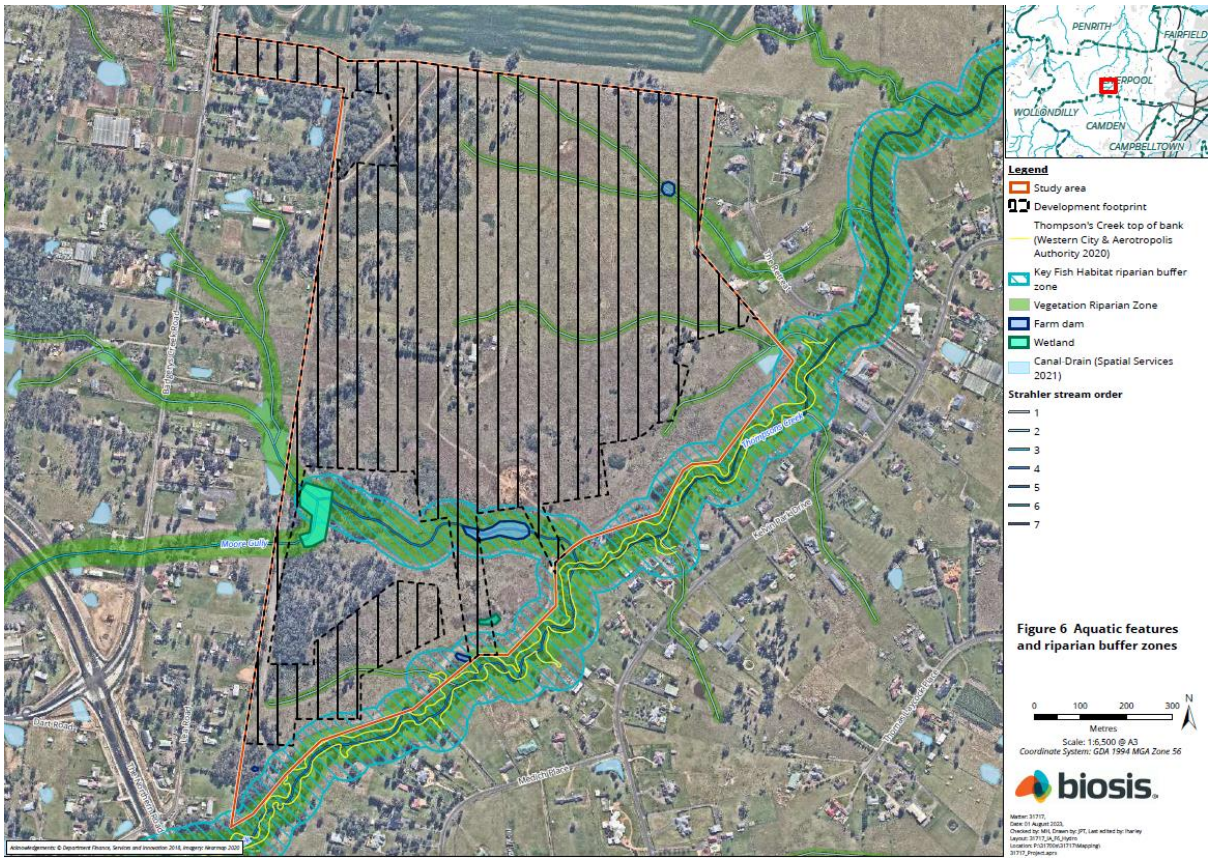


Figure 7: Aquatic features and riparian buffer zones (Appendix B, "20230913 Biodiversity Strategy and Impact Assessment")

5.3.8 Farm Dam Management

Objective:

To appropriately manage the re-construction, adjustment, decommissioning, or protection of existing farm dams within the extent of the project works.

Control Measures:

The following measures should be undertaken to manage and control Weeds:

- The Contractor shall comply with the guidelines set out in Appendix B: "20230913 Biodiversity Strategy and Impact Assessment"
- An aquatic pre-clearance assessment should be undertaken before the decommissioning an identified farm dam. The assessment should determine the presence of native aquatic fauna (fish, turtles, and eels) and develop a plan for their relocation during dam decommissioning. The assessment should also identify the presence of exotic fish species such as Eastern Gambusia that may need to be managed during dam decommissioning to prevent the species from entering nearby waterways.
- If dams are suspected of containing native aquatic fauna (fish, turtles and ells) a two-stage dam dewatering process should be adopted. Refer to item 22 of Table 17, Section 7 of Appendix B: "20230913 Biodiversity Strategy and Impact Assessment".
- Ensure that approval from the Principal or Principals Representative is provided in writing before commencing any dam decommissioning or dewatering.

5.3.9 Air Quality (Plant Emissions and Other Discharges to Air)

Objective:

To ensure there is no health risk or loss of amenity due to emission of exhaust gases or other discharges to air.

Control Measures:

- The Contractor shall comply with the guidelines set out in Appendix C: "Air Quality Impact Assessment Report"
- Vehicles and machinery to be maintained regularly and serviced to the manufacturer's specifications.
- Generally, if smoke is visible after 10 to 15 seconds of engine start-up or during normal operation, the vehicle may need to be serviced.
- Vegetation, building materials (such as timbers and plastics) must not be burned off. Vegetation should be mulched under direction from the Principal. Construction materials such as timber and plastics should be recycled.
-

5.3.10 Noise and Vibration

Objective:

To ensure that nuisance from noise and vibration from the works are mitigated and do not result in disruption to adjoining landowners.

Control Measures:

- The Contractor shall reference Appendix D: "20230913 Noise and Vibration Impact Assessment".
- A construction-phase assessment should be conducted on a stage-by-stage basis.
- Restrict hours in accordance with the EPA Noise Control Guidelines and the relevant approval.
- Advise residents when unavoidable out-of-hours work should occur.
- Give site personnel earmuffs/earplugs to ensure their auditory passages are protected whilst working near plant/machinery that may go over the 85dB safe limit.

5.3.11 Construction Waste Management

Objective:

To minimise the generation of solid wastes from construction activities and to appropriately dispose of generated solid waste.

Control Measures:

- All solid wastes should be placed in appropriately designed storage areas during construction.
- As part of progressive rehabilitation of areas any solid waste should be removed from site and disposed of appropriately. Work and surrounding areas should be maintained in a tidy condition.
- There should be no vegetation burning. All waste vegetation should be chipped or mulched on-site and reused or appropriately disposed of.
- Weeds are to be disposed of offsite in appropriate disposal facilities.
- Wastes should be collected for recycling and or disposal at designated tip sites.
- Maintain a high quality of housekeeping and ensure that materials are not left where they can be washed or blown away to become litter.
- Send waste concrete from demolition to a concrete recycler instead of landfill.
- Conduct site clean-up weekly.
- Using overburden to construct temporary noise barriers.
- Collecting lubricating oil from the construction vehicle fleet and sending it to a recycler.

- Collect steel, timber, concrete, and plastic waste into recycling bins and arrange to be used on another project if possible.

5.3.12 Storage of Fuels & Chemicals on Site

Objective:

To ensure that chemicals and fuel storage is safe and that any materials that escape do not cause environmental damage such as groundwater or soil contamination.

Control Measures:

- Minimise chemicals and fuel stored on site.
- Store dangerous chemicals in a roofed and bunded area with an impervious floor, separated and signed as required by relevant codes and standards.
- Bunds should be impervious to prevent spilled product from escaping.
- Any spillage should be cleaned up immediately.
- Where possible store each type of chemical/ fuel in a separate area so that spilled product can be retrieved and re-used (providing that it has not been contaminated with water or other debris).
- Maintain a record of Material Safety Data Sheets.
- Restrict the area in which hazardous materials can be stored during construction works.
- Have a spill kit available on site at all times.

5.3.13 Dirty Roads

Objective:

To ensure that roads are kept clean of contaminants and soil.

Control Measures:

- Prevention of soil being deposited on roads is preferable to cleaning them afterwards.
- All loads of soil being transported for off-site disposal should be covered.
- Secure and appropriately store all chemicals, fuels, and liquids that are on board vehicles exiting the site.
- If required, install litter traps lined with filter cloth in entry pits.
- If required, roads are to be swept or washed down.
- Provide a long firm surface that is weatherproof at the exit and entrance of site.
- Clean vehicles and their wheels prior to site exit.

5.3.14 Management of Stockpiles

Objective:

To manage soil stockpiles so that dust and sediment in run-off is minimised.

Control Measures:

- Minimise the number of stockpiles, and the area and the time stockpiles are exposed.
- Locate stockpiles away from drainage lines and at least 10m away from natural waterways and where they should be less susceptible to wind erosion. Sediment fencing should be placed at the base stockpiles to avoid sediment laden runoff entering waterways.
- Ensure that stockpiles have slopes no greater than 2:1 (horizontal: vertical).
- Stabilise stockpiles if left for more than 14 days by covering with anchored fabric or by seeding.
- Establish sediment controls around the downstream side of stockpiles that are to be left for longer than 14 days..
- Suppress dust generation from stockpiles as circumstance demand via water cart.

- Stockpiles should not be located under the drip line of trees or across drainage lines or gutters.

5.3.15 Heritage & Archaeology

Objective:

To prevent damage or loss to heritage places and objects which would result in loss of cultural, historic, and educational value to the community.

Control Measures:

- Fence around the heritage or archaeological site and create an exclusion zone;
- Comply with the requirements set out in the heritage assessment report to be developed prior to commencement of works.
- Establish and communicate the protocol to all workers and visitors on site. The Unexpected finds procedure in Appendix 1 of Appendix E "20230913 Statement of Heritage Impact Report" should be incorporated into the Protocol implemented.
- Place signs to indicate area is a 'No-Go' area;
- Ensure that the appropriate permits / authorisations have been received prior to commencing work.
- Provide protection for scar trees (if applicable).
- Consideration should be given to any works that are to be within close proximity of the SHR heritage item, Kelvin Homestead (refer to Figure 8 below). The contractor is to notify the Principal or the Principals Representative of any concerns regarding works and the heritage site.
- Engagement with Traditional Custodians has been established to inform the development. Refer to Appendix F "20230817 Aboriginal Engagement Outcomes Report".

Figure 8: Map showing heritage items in the vicinity of the project area. (Appendix E, "20230913 Statement of Heritage Impact Report")

Corrective Action:

All environmental incidents and breaches should be logged using the Principal Contractor's Environmental Controls Inspection Forms and Non-Conformance Reports and reported immediately to the Principal and the Principal's Representative by phone and in writing. The Principal Contractor

shall also prepare a Defects/Suggestion Report form (Non-Conformance Report Form) for each environmental breach or incident.

5.3.16 Contamination Management

Objective:

To safely and appropriately manage and treat/dispose of contaminated materials encountered or identified on the project.

Control Measures:

- The Contractor shall comply with the guidelines set out in Appendix I(a) and I(b): "20230913 Contamination Report (Site Audit Report)" and "20230913 Contamination Report (Site Audit Statement)" respectively.
- Refer to the Detailed Site Investigation, Bradfield City Centre (ERM, 10th November 2022 Rev 5)
- Refer to the Asbestos Management Plan, Bradfield City Centre (ERM, 8th November 2022, Rev 2) Fence around site and create an exclusion zone;
- Establish an Unexpected Finds Protocol and communicate the protocol to all workers and visitors on site. The Unexpected finds procedure in Appendix I(b) "Contamination Report (Site Audit Statement)" should be incorporated into the Protocol implemented.
- If there is the potential for asbestos contamination, all safety controls should be put in place prior to starting work. This includes access to safety equipment such as coverall suits, latex gloves, and face masks/safety glasses.
- When asbestos-contaminated material has been discovered, all work is to be stopped, with the relevant authorities being called.
- The site is to be isolated until the asbestos material has been tested by the qualified project contamination consultant.

5.3.17 Energy Use

Objective:

To minimise the use of non-renewable energy.

Control Measures:

- Do not leave machinery or vehicle engines on when this is not necessary.
- Switch off lights when rooms are not used.
- Adopt solar technology for items such as VMS boards, cameras, sheds etc. if able.

5.4 Monitoring and Review

All environmental management activities and controls are to be monitored regularly, to ensure that all systems and controls are working suitably and correctly. This includes dust, noise, and contaminant control.

Controls for dust, sediment, noise, fauna protection, and traffic will require regular inspections and reporting to ensure compliance with the relevant documents and conditions of consent. The responsibility for compliance rests with the Principal Contractor and should be inspected periodically by the Site Supervisor.

5.5 Summary of Environmental Management and Controls

The following table identifies potential site environmental management activities with their associated mitigation measures that will be used to minimise the impact on the environment.

Impact / Hazard	Time effective	When to Inspect	Controls
Spillage of toxic/hazardous materials	Start to Finish	Every Week	Materials are to be stored in the designated material storage area. All hazardous and toxic materials are to be stored further into the area, to ensure they are contained and not out in the open. All hazardous materials are to be accompanied by a relevant MSDS. All machines are to be refueled in designated zones on site only if necessary. It is strongly preferred that all machines are to be refueled off site. Prior to refueling, ensure that there are no leakage areas in/on the vehicle. Turn off the vehicle prior to refuelling. Ensure that the fueling area is contained and manageable in the case of a spill (bunded) and away from any sensitive areas. Once the vehicle has been refueled, safely remove all potentially hazardous refuelling material from the area. Ensure that they are properly secured and tightened, so that no spillage can occur from the storage device. Fuel is to be stored in the hazardous material storage area.
Asbestos contamination	When Asbestos is found	Prior to asbestos removal completion to ensure all material has been removed	If there is the potential for asbestos contamination, all safety controls should be put in place prior to starting work. This includes access to safety equipment such as coverall suits, latex gloves, and face masks/safety glasses. When asbestos-contaminated material has been discovered, implement the unexpected finds protocol outlined in the Detailed Site Investigation, Rev5, Final V2, by Environmental Resources Management Australia Pty Ltd. All work is to be stopped, with the relevant authorities being called. The site is to be isolated until the asbestos material has been tested and removed by the certified Class A or B licensed asbestos remover. All asbestos material is to be removed and delivered to a nominated licensed asbestos removal dump area. Asbestos is to be wet down prior to removal, to ensure particles do not escape into the air.
Improper environmental control setup	Site Establishment	Every Week	All environmental controls including those for dust, runoff, noise, rubbish, and spillages are to be inspected every week by the principal contractor to ensure that all controls are working effectively. This is to ensure there are no problems with the system. After the initial site establishment, all environmental controls are to be inspected and tested prior to first usage. This is to ensure all controls have been set up properly and are not faulty/have not been damaged.

Runoff	After Site Establishment to Finish	Each Week	Silt fences are to be installed around the boundary of the site according to the site plan/drawings. These fences are to be installed within the site, with the foreman/site manager ensuring that there are no perforations/penetrations in the silt fence that may cause the runoff the escape through. With regards to general pits and kerb pits, they are also to be protected. General pits with grating are to be protected with a silt fence with star posts surrounding all four sides of the pit. Kerb and gutter pits are to be protected using a gravel infill sock around the open area, to redirect flow around the pit to ensure runoff water does not escape into the stormwater system. Water is only to be taken from trusted sources which have been tested.
Dust	After Site Establishment to Finish	Daily	Removed spoil and excavated ground area is to be wet down via use of a water cart to ensure dust particles do not form in the air and fly away. Prior to ending the day, the spoil in the stockpile area should be checked to see if has been wet down, if not then wetting down of this stockpile is necessary. After that, the stockpile mound is to be covered using a tarp/cloth to ensure winds at night don't blow away excess materials that may create dust particles. This control is to be used in combination with temporary fence mesh so that dust particles do not escape the site. If the above 2 controls do not prove to be effective, then misters are to be installed on the temporary fencing surrounding the site. They are to be connected to a trusted and tested water source. If misters are being used, they are to be tested prior to be used for dust control, to ensure there are no faults in the system. These dust controls should be checked regularly every week. Wetting down of excavated and spoil stockpiled areas should occur before work finishes every day, to ensure that the site will not produce too much dust particles overnight due to wind.
Flora/Fauna	Before Site Establishment	After removal	All flora and fauna hazards are to be identified prior to site establishment. All trees which are deemed to be protected and/or not removed on the site plan are to be marked and kept safe with barriers surrounding the protected vegetation. This includes the insulation of minor silt barriers around trees to ensure that spoil runoff does not affect the trees. All trees/vegetation marked for removal are to be removed by chopping it down in a safe manner. The stump is to be removed and the area checked to see it there are roots left. All leftover root material is also to be removed. If possible, removed trees are to be removed as a whole, with the entire root system so that they can be replanted on site or moved to another area. The remaining area is to be filled with appropriate soil material that may be taken from other areas on the site.

Noise	After Site Establishment to Finish	Daily	Noise levels are to be kept to as low as possible measurements whilst working. Plant is not to be left unattended and idle if not working as this creates extra unneeded noise. Works are only to be conducted during the allocated working hours unless expressed otherwise. In areas where noise exceeds the 85dB limit, earmuffs are to be worn. When work which may produce loud noise is being conducted, the council and any surrounding neighbours that may be affected are to be informed beforehand. Complaints by neighbours are to be reviewed with top priority by the Principal Contractor, with a suitable solution being found as a result.
Rubbish and Recycling	Start to Finish	Each Day	Construction waste is to be stockpiled into piles which are separated from excavated material. Rubbish should be located and thrown into the bins located on site. Any recyclable materials should be gathered and appropriately categorised whether or not they are able to be recycled.
Water Quality	After beginning to use water cart	Each time related activity occurs	Ensure quality of water/source of water prior to using it. Water that used on the site (i.e. for dewatering) should be clean and not contaminated
Dirty Roads	Start to Finish	After Works/Daily	Prevent soil from entering roads. Ensure that trucks taking soil are covered. Ensure that all sediment that may fall onto the road is cleaned up each day.

APPENDIX A

20230913 Flooding Impact Assessment

Western Parkland City Authority

Bradfield City Centre Master Plan Application

Flood Impact Assessment

Prepared by Advisian Pty Ltd

September 2023

wpca.sydney

NSW GOVERNMENT

Acknowledgement of Country

Aboriginal people have had a continuous connection with the Country encompassed by the Western Parkland City (the Parkland City) from time immemorial. They have cared for Country and lived in deep alignment with this important landscape, sharing and practicing culture while using it as a space for movement and trade.

We Acknowledge that four groups have primary custodial care obligations for the area: Dharug/Darug, Dharawal/Tharawal, Gundungurra/Gundungara and Darkinjung. We also Acknowledge others who have passed through this Country for trade and care purposes: Coastal Sydney people, Wiradjuri and Yuin.

Western Sydney is home to the highest number of Aboriginal people in any region in Australia. Diverse, strong, and connected Aboriginal communities have established their families in this area over generations, even if their connection to Country exists elsewhere. This offers an important opportunity for the future of the Parkland City.

Ensuring that Aboriginal communities, their culture, and obligations for Country are considered and promoted will be vital for the future of the Parkland City. A unique opportunity exists to establish a platform for two-way knowledge sharing, to elevate Country and to learn from cultural practices that will create a truly unique and vibrant place for all.

Garungarung Murri Murri Nuru
(Beautiful Grass Country)
Artwork created by Dalmarri artists Jason Douglas and Trevor Eastwood for the Western Parkland City Authority

Version	Status	Date	Prepared By	Reviewer	Comments
1	Draft Report	3/07/2023	LT / CRT		
2	Final Report	4/07/2023	CK (WPCA)	JA (WPCA)	Final revisions made involving formatting and spelling
3	Final Report	2/08/2023	Jason Azucena (WPCA)	Jason Azucena (WPCA)	
4	Publish	17/08/2023	----	Jason Azucena (WPCA)	
5	Publich	12/09/2023	----	Hannah Gilvear (WPCA)	Amendment to Table 1

Executive Summary

The existing flood characteristics along Moore Gully and Thompsons Creek during a 1% Annual Exceedance Probability (AEP) event have been assessed using a purpose-built TUFLOW model of the catchment extending upstream from the Bradfield City Precinct. The results from this modelling have been validated by reference to the results of the broad-scale flood modelling that was completed as part of work documented in a report titled, *'Wianamatta South Creek Catchment Flood Study - Existing Conditions'* (2022). The existing conditions modelling for the 2022 study was undertaken using an RMA-2 flood model that was originally developed for Penrith City Council as part of the *'Updated South Creek Flood Study'* (2015), and which was substantially extended to assess flooding across the Aerotropolis Precincts.

In order to quantify the potential impacts of the proposed Bradfield City Centre development, the TUFLOW flood model was modified to incorporate the post-development landform and proposed land use associated with the development proposal. The modified TUFLOW model was used to assess flood characteristics along Moore Gully and Thompsons Creek under post-development conditions during a 1% AEP event.

The impact of the Bradfield City Centre was assessed by comparing the post-development model results against the model results derived for existing conditions. The comparison shows that the development as currently proposed will result in some off-site increases to estimated peak 1% AEP flood levels and flow velocities for existing conditions. However, these increases are limited to three areas; one along Moore Gully in the area immediately adjacent to and upstream of the development precinct; another along Thompsons Creek near to and downstream of its confluence with Moore Gully; and a downstream location along the eastern edge of the precinct (refer **Figure A9** and **Figure A10**).

The 1% AEP flood level increases predicted near the Thompsons Creek / Moore Gully confluence range between 0.03 and 0.06m. Increases of this magnitude exceed those typically accepted as being within the accuracy of the modelling or data on which the modelling relies on. However, the location and extent of the predicted increases occur on land which is designated as 'Local Open Space and Drainage' and/or 'Stormwater Infrastructure' on the Land Reservation Acquisition Map that accompanies State Environmental Planning Policy (Western Parkland City) 2021. Hence, the predicted increases in 1% AEP flood level and any associated increase in the frequency of flooding of the land will not manifest to cause an adverse impact to the future use of the affected land. Moreover, the affected land will be dedicated to open space and/or a drainage function, and therefore the future use is compatible with or can be tailored to accommodate the predicted increase in flood affectation.

Due to the limited extent of the impacts elsewhere along Moore Gully, it is anticipated that they can be mitigated through further refinement of the post-development land surface near the precinct boundaries as well as implementation of the stormwater drainage network that is proposed for the development.

Accordingly, it is recommended that the following be undertaken to address the predicted off-site impacts.

a) The design land surface for the Bradfield City Precinct should be further refined along the western site boundary near the new Moore Gully alignment. The refined land surface should allow for greater conveyance of flow in an easterly direction along Moore Gully and from the north-western tributary that drains to it. The refined land surface should allow for a waterway opening to allow flows from the catchment to the north-west of the site to enter Moore Gully. The refined land surface should also allow for a swale in a north-south alignment along the western site boundary to convey flows into Moore Gully. The exclusion of these features will likely lead to increases in flood level and/or flow velocity in areas outside of the site boundary.

b) The design should also allow for culverts to be installed along the western site boundary to alleviate local ponding on the western side of the road.

c) A stormwater drainage network should be designed and installed to alleviate the ponding of runoff in the streets of the proposed development. This will serve to reduce the magnitude and extent of the off-site impacts at this location.

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Glossary of Terms

AS	Australian Standard
Aerotropolis	Western Sydney Aerotropolis
BC Act	Biodiversity Conservation Act 2016
CIV	Capital Investment Value
DA	Development Application
DP	Deposited Plan
DPE	Department of Planning and Environment
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
LEP	Local Environmental Plan
LGA	Local Government Area
NSW Government	State Government for NSW
SEPP	State Environmental Planning Policy
AEP	Annual Exceedance Probability
mAHD	metres above Australian Height Datum
ARI	Average Recurrence Interval
FPA	Flood Planning Area
FPL	Flood Planning Level
PMF	Probable Maximum Flood
PMP	Probable Maximum Precipitation

1 Introduction

1.1 Purpose of this report

This report accompanies the Master Plan Application for the Bradfield City Centre submitted to the Department of Planning and Environment (DPE).

The purpose of this report is to define existing flood characteristics along the sections of Moore Gully and Thompsons Creek that run through or adjoin the Bradfield Precinct and to assess the impact of the proposed Bradfield City Centre development on those flood characteristics. Mitigation measures are to be provided where flood impacts are identified.

1.2 The Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,200-hectare region set to become Sydney's third city (the Western Parkland City), and the gateway and economic powerhouse of Western Sydney.

The Aerotropolis comprises of the new Western Sydney (Nancy-Bird Walton) International Airport surrounded by five initial precincts which include the Aerotropolis Core, Wianamatta– South Creek Northern Gateway, Agri-business and Badgerys Creek outlined in **Figure 1** overleaf.

The final Aerotropolis planning package, including the Precinct Plan and State Environmental Planning Policy (SEPP) Amendment, was gazetted by DPE in March 2022 and the Development Control Plan Phase 2 was finalised in November 2022. These documents have been used to inform the preparation of the Bradfield City Centre Master Plan.

The proposed Master Plan Application for the site has also been prepared using the Western Sydney Aerotropolis Master Plan Guideline and Master Plan Requirements.

2 Bradfield City Centre

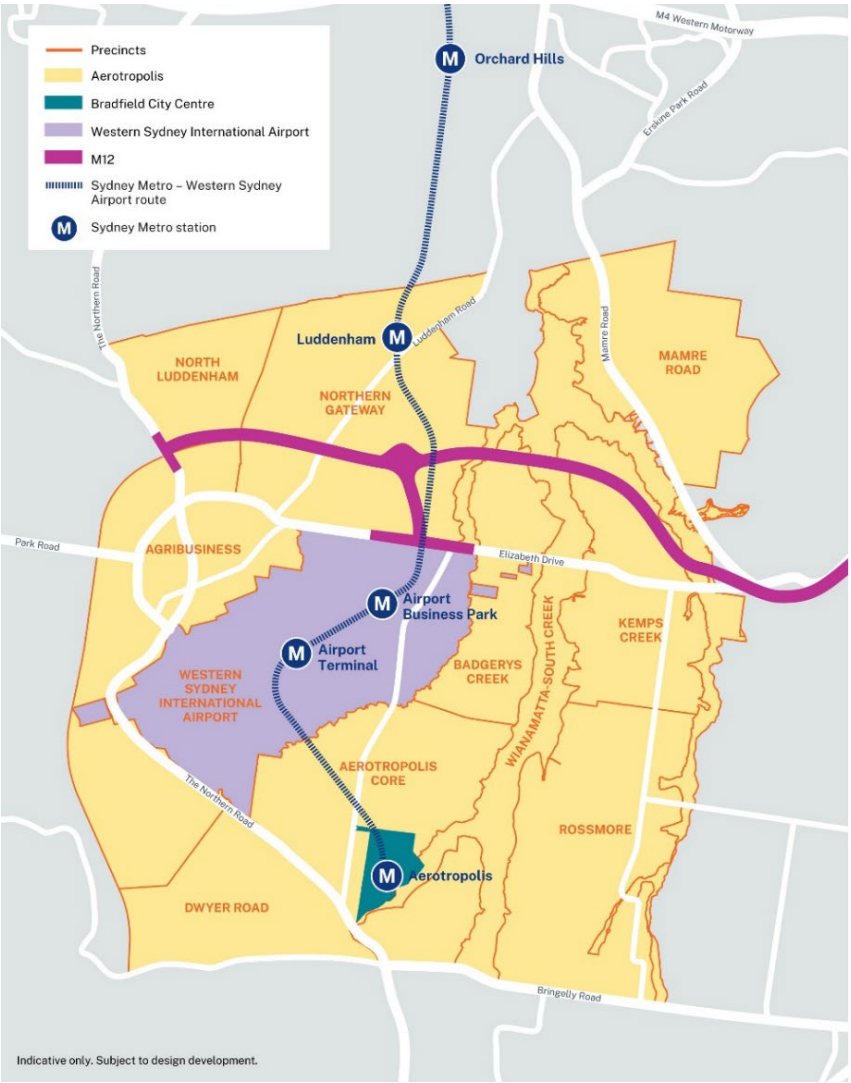
2.1 Strategic Context

The Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and The Northern Road (refer **Figure 1**).

The Sydney Metro Western Sydney Airport line will run through the site, providing connections from the key centre of St Marys through to stations at Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis, which is located within the site.

The site is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, the M12 and The Northern Road.

Figure 1 - Strategic Context



Set on natural waterways, Bradfield City Centre presents a rare opportunity to showcase the best urban design and to create a thriving, blue and green, connected City in which Australians will want to live, learn, and work. The Bradfield City Centre will be a beautiful and sustainable 22nd Century City. It will foster the innovation, industry and technology needed to sustain the broader Aerotropolis and fast track economic prosperity across the Western Parkland City.

2.2 The Master Plan Site

The street address for Bradfield City Centre is 215 Badgerys Creek Road, Bradfield (the Site) within the Liverpool Council Local Government Area (LGA). The site is legally described as Lot 101 DP 1282949 and has an area of 114.6 hectares, with road access to Badgerys Creek Road located at the north-western corner. The site spans across the Aerotropolis Core and Wianamatta-South Creek Precinct, within Western Sydney Aerotropolis. The Site is outlined in **Figure 2** below.

The Site is predominantly zoned Mixed Use under the Western Parkland City SEPP, with a small portion of Enterprise zoned land located on the north-western corner of the site. The site also includes Environment and Recreation zoned land mostly along Thompsons Creek.

Figure 2 - Master Plan Site

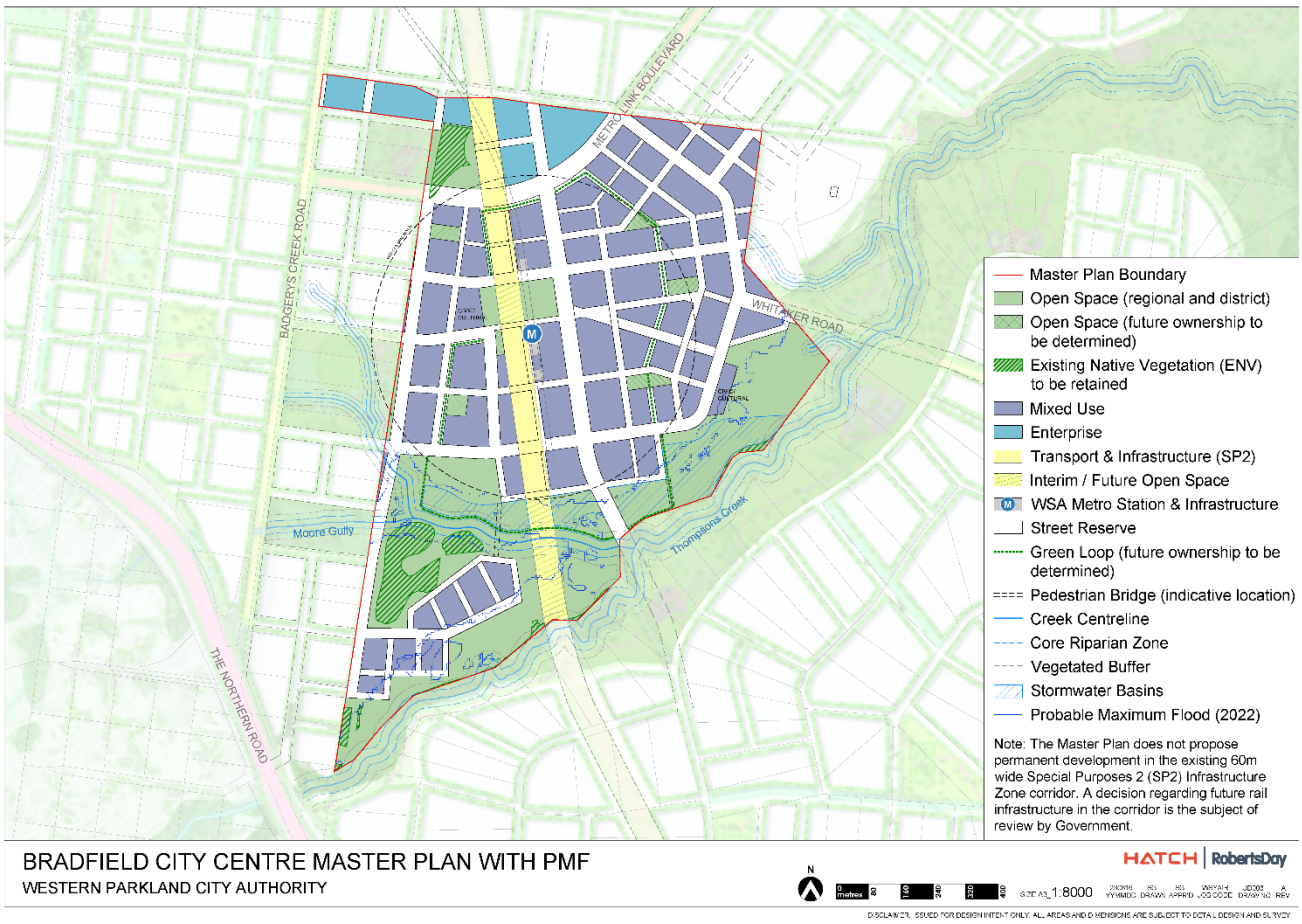
2.3 The Bradfield City Centre Master Plan

The Western Parkland City Authority has prepared a Master Plan (**Figure 3** below) in accordance with the DPE Master Plan Requirements.

The Master Plan sets out a framework for future development within the Bradfield City Centre which includes:

- Road network, key connectors to adjoining land and the regional road network (existing and future)
- Block structure
- Indicative open space network
- Sustainability strategy
- Social and infrastructure strategy
- Arts and culture strategy
- Infrastructure servicing strategy

Figure 3 - Master Plan



2.4 The Proposal

The Bradfield City Centre Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons for technical assessments.

Table 1 - Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500 sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000 sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

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3 Baseline Investigations – Existing Flood Conditions

The Bradfield City Centre is located within the catchment of Thompsons Creek which is a tributary of the upper reaches of Wianamatta South Creek. Additionally, Wianamatta South Creek is a tributary of the Hawkesbury River. It drains a 414 km2 catchment that extends from its headwaters near Narellan in the south, to its confluence with the Hawkesbury River near Windsor. Wianamatta South Creek generally flows from south to north through the catchment with the commercial centres of Penrith and Blacktown located to the west and east, respectively. Large areas of the catchment have been urbanised particularly in the vicinity of these commercial centres (Advisian, 2020).

The Bradfield City Centre will be sited on land that adjoins Thompson Creek and Moore Gully. Moore Gully is a tributary of Thompsons Creek and flows from west to east through the southern portion of the site before discharging into Thompsons Creek at the south-eastern site boundary. Thompsons Creek flows from south-west to north-east along the site boundary and discharges into Wianamatta South Creek about 1.7 kilometres downstream of the Site.

The existing flood conditions along Moore Gully and Thompsons Creek are presented in the following.

3.1 Background Studies

A number of previous hydrologic and hydraulic investigations have been undertaken to examine the nature and extent of flooding in the Wianamatta South Creek catchment. These include the following reports:

- *'Flood Study Report, South Creek'* (Department of Water Resources, 1990)
- *'South Creek Floodplain Management Study'* (Willing and Partners Pty Ltd, 1991)
- *'ADI St Mary's Watercycle & Soil Management Study - Final Study Report'* (Sinclair Knight Merz, 1998)
- *'Austral Floodplain Risk Management Study and Plan'* (Perrens Consultants, 2003)
- *'South Creek Floodplain Risk Management Study and Plan'* (Bewsher Consulting, 2004)
- *'Upper South Creek Flood Study'* (WMA Water, 2012)
- *'Upper South Creek Floodplain Risk Management Study and Plan'* (Cardno, 2014)
- *'Updated South Creek Flood Study'* (WorleyParsons, 2015)
- *'South Creek Floodplain Risk Management Study and Plan'* (Advisian, 2020)
- *'Wianamatta South Creek Catchment Flood Study – Existing Conditions'* (Advisian, 2022)
- *'Wianamatta South Creek Catchment Flood Study – Cumulative Impact Assessment'* (Advisian 2023)

The work completed as part of the *'Wianamatta South Creek Catchment Flood Study – Existing Conditions'* (*Advisian, 2022*) involved a comprehensive update of the XP-RAFTS hydrologic model of the catchment that

was relied upon for the 2015 Flood Study and the 2020 Floodplain Risk Management Study. It also involved substantial refinement and extension of the RMA-2 flood model that was used for both of these previous studies to simulate flood behaviour between the Bringelly Road crossing in the south and the Richmond Road crossing near Windsor. The updates to the models were undertaken to ensure that they captured contemporary catchment conditions.

3.2 Hydrologic Modelling

The updated XP-RAFTS model was used to simulate the flood hydrology for a range of event including the 1% AEP design event.

Temporal patterns and Intensity-Frequency-Duration (IFD) data were adopted based on *Australian Rainfall and Runoff 1987* (ARR 1987). This is consistent with the 2015 Flood Study and the *'Wianamatta (South) Creek Catchment Flood Study – Existing Conditions'* report which was published in 2022. The 2022 Study found that ARR 1987 based design flood estimation procedures achieved a better validation to flood-frequency-analysis at the Elizabeth Drive gauge than ARR 2019 based procedures.

Standard pervious area design loss rates for NSW east of the western slopes have been adopted, namely an initial loss rate of 10 mm and a continuing loss rate of 2.5 mm/hr.

A 36-hour critical storm duration was adopted for catchment areas along the Wianamatta South Creek corridor, while 2-hour and 9-hour storm durations were also adopted to simulate the critical duration along many of the smaller tributaries that drain to Wianamatta South Creek. It was determined that the critical storm duration along Thompsons Creek and Moore Gully was 2 hours.

Accordingly, the 2-hour duration storm was simulated in the flood model.

3.3 Hydraulic Modelling

A new two-dimensional TUFLOW hydraulic model was developed for the Bradfield City Centre, including the upstream catchments of Moore Gully and Thompsons Creek. This new TUFLOW hydraulic model was developed in order to provide a tool that was tailored to determining flood behaviour in the immediate vicinity of the Bradfield City Centre, given that the existing RMA-2 model domain covered the entire Wianamatta South Creek floodplain between Bringelly Road and Richmond Road.

3.3.1 Model Domain and Terrain

The TUFLOW model extent comprises an area of 9.2 km^2 as shown in **Figure 4**. This extent covers the Thompsons Creek and Moore Gully catchments which drain towards the site and Wianamatta South Creek, including areas upstream of The Northern Road and Bringelly Road / Greendale Road.

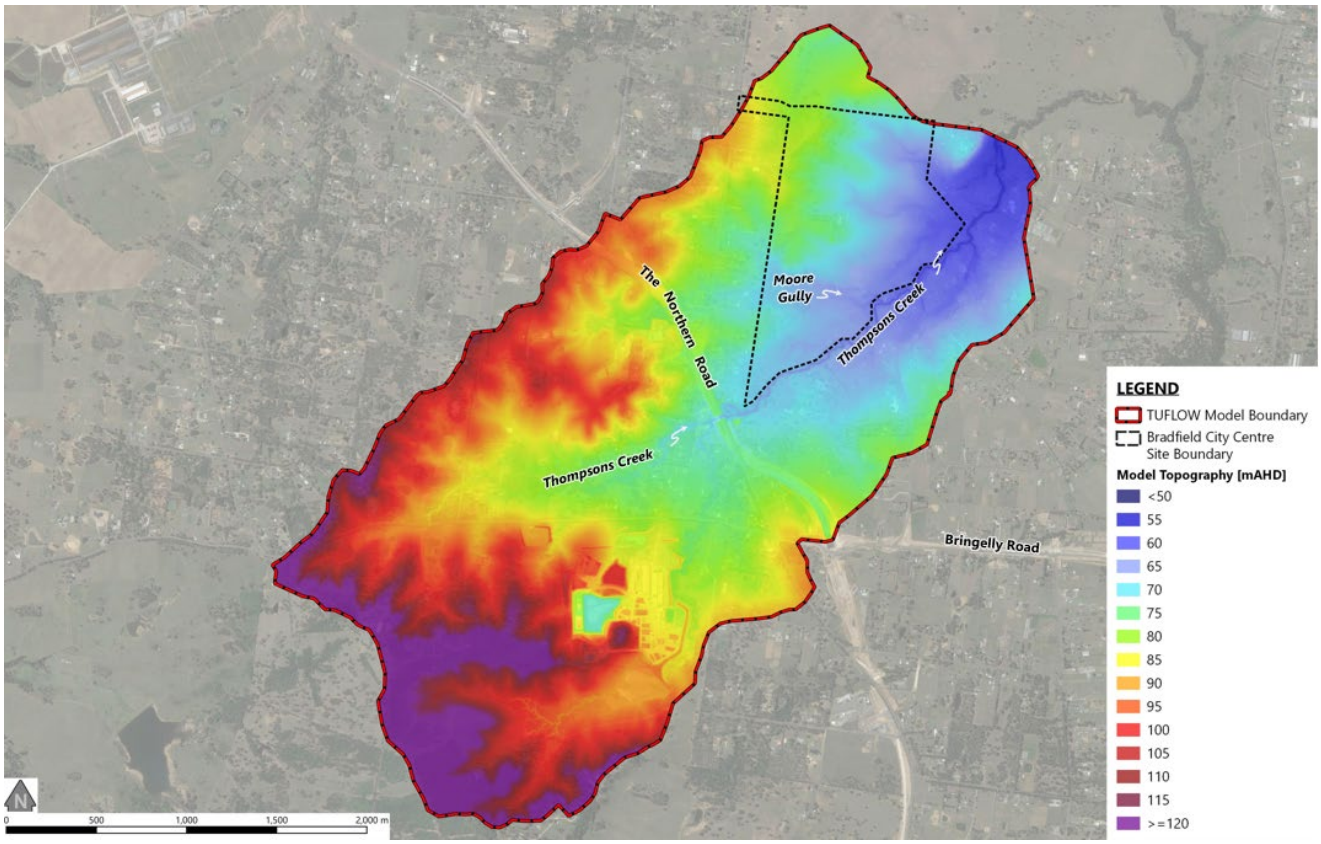
A model grid size of 3 metres was adopted to resolve the terrain and hydraulic characteristics of the study area to a high level of detail. This results in the terrain being sampled a 1.5-metre centres.

The TUFLOW model terrain was constructed using a 1-metre resolution digital elevation model (DEM) derived from LiDAR survey captured in 2019. The DEM was obtained from the ELVIS on-line elevation data portal.

No structural survey data was provided for the project. Accordingly, TUFLOW model techniques were adopted to hydraulically approximate major culverts in 2D and enable flow continuity across road embankments.

The model terrain is also shown in **Figure 4**.

Figure 4 - TUFLOW Model Boundary and Model Topography (Existing Conditions)



3.3.2 Hydraulic Roughness

Hydraulic roughness coefficients (Manning's 'n') are used to represent the resistance to flow of different surface materials. Hydraulic roughness has a major influence on flow behaviour in hydraulic models.

The TUFLOW model extent was delineated into several categories of surface material types using cadastral data and aerial photography. To ensure consistency, the adopted material types and associated Manning's 'n' roughness values were selected with reference to the values adopted in the RMA-2 flood model that was developed and applied as part of the *Wianamatta South Creek Catchment Flood Study* (2022).

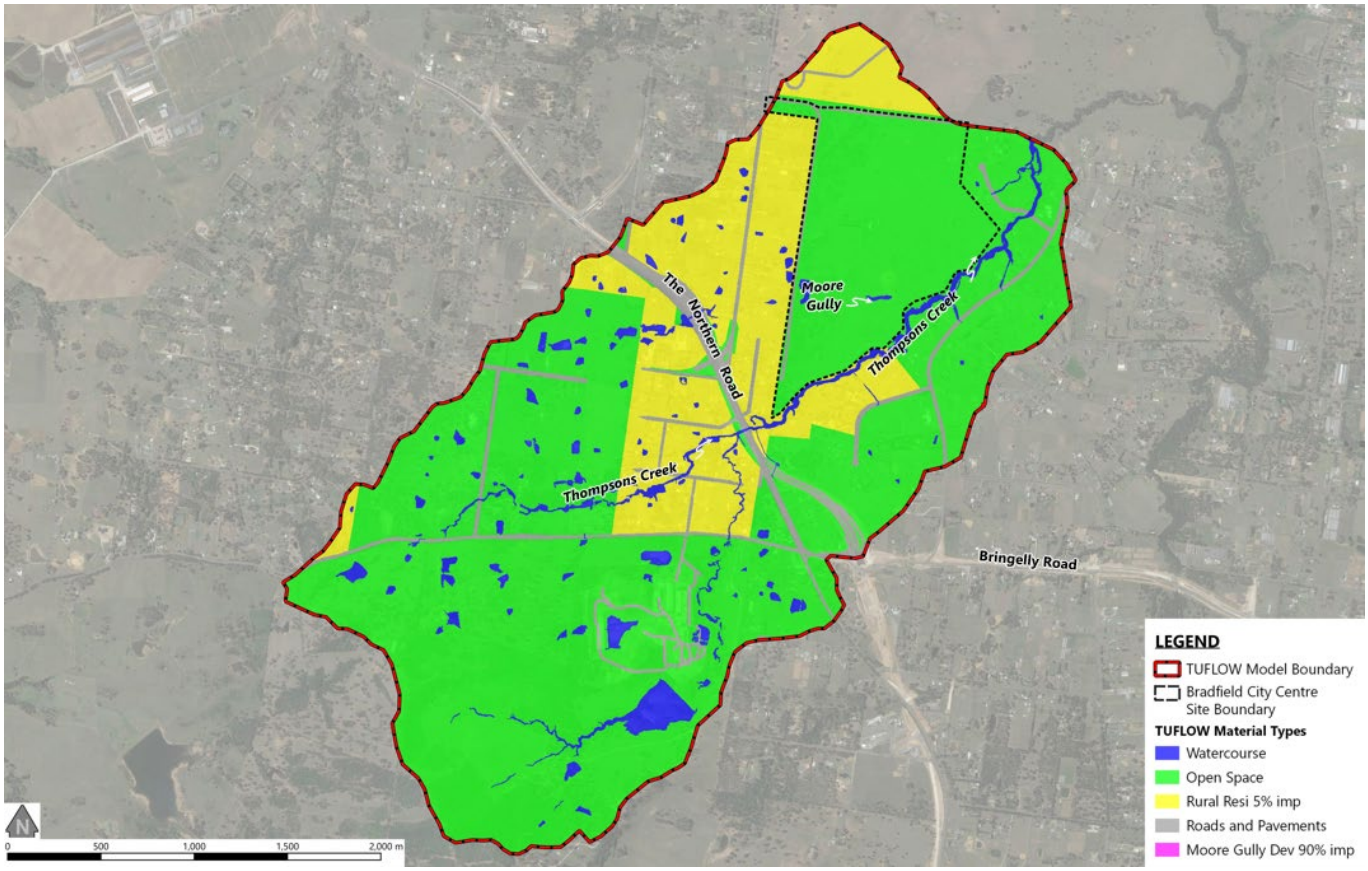
Manning's 'n' roughness coefficients applied in the TUFLOW model are listed in **Table 2**, with the delineation of hydraulic roughness zones shown in **Figure 5**.

Table 2 - Adopted Manning's 'n' Hydraulic Roughness Coefficients

Material Type	Manning's 'n'	% Impervious
Watercourses	0.055	100
Open Space	0.05	0
Vegetation – Low to Medium Density	0.08	0
Vegetation – High Density	0.12	0
Rural	0.05	2
Rural Residential	0.08	5
Residential	0.10	40
Road	0.03	100
Bradfield Development	0.05*	90

**Low Manning's 'n' adopted to reflect increase in runoff generation*

Figure 5 - TUFLOW Model Hydraulic Roughness Delineation (Existing Conditions)



3.3.3 Initial Water Levels

Numerous farm dams of varying sizes are located within the TUFLOW model extent. These water storages are typically assumed to be 'full' at the beginning of design storm simulations so that they do not unduly reduce flow rates and volumes.

Accordingly, initial water levels were assigned for 88 farm dams. The farm dam locations and their full storage levels were derived through a review of preliminary TUFLOW modelling results and interrogation of LiDAR to determine minimum elevations at which flows would discharge from the dams.

3.3.4 Model Boundary Conditions

The 'direct rainfall' hydrologic modelling approach was adopted whereby rainfall is input directly to the TUFLOW hydraulic model which then resolves the rainfall-runoff process based on the terrain and surface material information.

This approach was adopted in part due to the presence of numerous small farm dams. Experience shows that the influence of these small farm dams on hydrologic behaviour is often not well resolved in a traditional hydrologic model.

A normal-depth outflow boundary was placed across each watercourse / flow path at the downstream extent of the model. Water levels along these boundaries are calculated by the software according to the flow rate, bed slope and surface materials.

3.4 Flood Modelling Results for Existing Conditions

Flood mapping for Thompsons Creek and Moore Gully under existing conditions is presented in **Appendix 1**. This includes mapping of peak flood depths, levels, velocities, and hazards for the 1% AEP design event. All mapping is presented superimposed over the proposed Bradfield City Centre site boundary. The following flood mapping has been provided:

- **Figure A1**: Peak flood depths during the 1% AEP event (existing conditions)
- **Figure A2**: Peak flood levels during the 1% AEP event (existing conditions)
- **Figure A3**: Peak flow velocities during the 1% AEP event (existing conditions)
- **Figure A4**: ARR 2019 flood hazard categories during the 1% AEP event (existing conditions)

The flood modelling results show that there are several overland flow paths which discharge into Moore Gully and Thompsons Creek in the vicinity of the Bradfield City Centre. There are several farm dams located 'on-line' along the alignment of the main Moore Gully channel and its tributaries. The results indicate that there is also an overland flow path which drains northward near the north-western corner of the Bradfield City Centre.

The Bradfield City Centre lies between Thompsons Creek to the east and the Thompsons Creek watershed to the west, with elevations ranging from about 85 to 55 mAHD. The TUFLOW modelling results include all creeks, tributaries, and overland flow paths in the upper catchment of Thompsons Creek. Accordingly, the range of 1% AEP peak flood levels is comparable to that of the terrain itself, ranging from about 60 to 75 mAHD.

The peak 1% AEP flood depths along major flow paths are typically less than 1 metre except along Thompsons Creek. Flow velocities are also generally quite low and do not exceed 1 m/s except along Thompsons Creek and in small areas of localised steep terrain.

The model results indicate that floodwaters are generally confined within the channels of Moore Gully and Thompsons Creek during the 1% AEP event. The model results also indicate that the downstream model boundary performs well in allowing floodwaters to “flow out” of the model and does not cause water to “back up” into the development site.

4 Assessment Requirements and Policy Context

4.1 Master Plan Requirements

The DPE have issued Master Plan Requirements (MPRs) to the Authority for the preparation of a Master Plan for Bradfield City Centre. A review of the MPRs was undertaken to identify those requirements which require consideration of the risk of flooding. The review identified that some elements of MPR 14 require specific consideration of the potential for development to cause adverse flood impacts and / or increase flood risk to future occupants of the city. Accordingly, this report has been prepared to address these requirements which are listed in **Table 3**.

Table 3 - Master Plan Requirements

Reference	Master Plan Requirement	Where addressed
14 Flood Planning	The draft master plan must be supported by a Flood Impact and Risk Assessment (FIRA) prepared by a suitably qualified person in line with the Flood Risk Management Guide. The FIRA is to: • be informed by relevant studies • include the necessary flood mapping and stormwater reporting describing and addressing stormwater quantity and quality control management strategy, onsite detention, overland flow paths, concept design plans and drawings • include a flood impact assessment for existing and post development conditions with hydrologic and 2D hydraulic modelling for range of storm events • model and assess the impacts of future development on flood behaviour • identify emergency management arrangements for a range of flood events • demonstrate consistency with the WPC SEPP, NSW Floodplain Development Manual, Flood Risk Management Guide and other local or State studies, policy guidance, and management plans • undertake MUSIC Modelling. The draft master plan is to consider the submissions from DPE - Environment and Heritage Group and Liverpool City Council (Attachment A).	This report

A range of agency and council requirements for development of the Master Plan have also been provided to the Authority. Those that relate to flooding and floodplain management are outlined in **Table 4**.

In considering these requirements, it is noted that Advisian is the author of the following reports identified by DPE as those which should be referenced when considering flooding and flood impacts for development sites within the Aerotropolis Precinct, including Bradfield.

- *Western Sydney Aerotropolis Flood Impact Assessment'* (in draft, 2021) prepared for the Western Sydney Planning Partnership
- *Wianamatta South Creek Catchment Flood Study – Existing Conditions* (2022) prepared for Infrastructure NSW
- *Wianamatta South Creek Catchment Flood Study – Cumulative Impact Assessment* (2023); prepared for Infrastructure NSW.

Advisian also developed the flood model that these reports rely upon.

The DPE requirement is that the analysis of flood impacts makes use of the latest information presented in these reports and on the model on which that information is based. A further requirement is that the development be consistent with the provisions of the Draft Aerotropolis Phase 2 DCP. The FIA for the Bradfield development, including the modelling on which it relies, has been undertaken in accordance with these documents, the provisions of the Aerotropolis Phase 2 DCP and guidelines outlined in the NSW Floodplain Development Manual (2005).

Table 4 - Agency and Council Comments

Reference	Agency and Council Comment	Where addressed
Liverpool City Council 5. Flood Plain Engineering Response	A Water Cycle Management Strategy covering both mainstream & overland flooding on the site must be prepared and necessary information as outlined below submitted for assessment with future master planning documents: ▪ Flood impact assessment covering both mainstream & overland flooding must be undertaken for existing and post development conditions with hydrologic and 2D hydraulic modelling for range of storm events up to the 1 %AEP event. ▪ Existing overland flow paths on the site to be managed and conveyed safely. Existing overland flow paths through the site from external catchment shall not be obstructed and be accommodated into proposed stormwater drainage system up to the 1%AEP storm event. Post development flood impact assessment shall consider future development of external catchments in accordance with Aerotropolis Precinct plan. Detailed flood impact assessment report with necessary flood mapping for pre & post development scenarios, stormwater report describing & addressing stormwater quantity & quality control management strategy and hydrologic/hydraulic analysis, concept design plans & drawings of master plan development to be submitted for preliminary assessment of the proposal.	Sections 4, 6 and 7 of this report
Department of Planning and Environment (Environment and Heritage Group) 5. Flooding	At this stage of the Master Planning process, the available information includes: 1. a Structure Plan and high-level strategy to deliver some key elements such as preservation of infrastructure corridor, staging of delivery of civic spaces, provisions related to open spaces and access, environmental zones, and alignment of key roads 2. a Public Domain Concept Plan. The fully established details for various developments within the area of the Master Plan, including the detail of proposed basins, potential earthworks and filling, infrastructure design, vegetation, final landform along with other urban development are not available at this Stage. These details are required to model and assess the impact of development on flood behaviour or to address emergency management during construction and operation. Moreover, a flood impact and risk assessment which includes post development modelling will only be based on assumption for the development components. It will be a duplication of the preliminary assessment undertaken by Advisian for the Planning Partnership Office i.e., *Western Sydney Aerotropolis Precincts – Flood Impact Assessment*. Given the lack of availability of key post developed information to inform post development flood modelling, development components will need to be considered through analysis of the post developed modelling over time through case-by-case flood impact and risk assessments (FIRAs) consistent with the provisions of the Draft Aerotropolis Phase 2 DCP. This must be reflected as a key outcome of the Master Plan. A broader view on the cumulative impacts of development will need to be the likely	Sections 4, 6 and 7 of this report

Reference	Agency and Council Comment	Where addressed

	ongoing responsibility of the relevant council to ensure these impacts are managed.
	
	Accordingly, the assessment requirements identified in Section 18. Flooding of the draft Master Plan Assessment Requirements are not achievable at this stage. EHG has identified appropriate assessment requirements below.
	
	Assessment Requirements
	Use of up-to-date flood information
	The flood map provided in Master Plan Request report dated 8 April 2022 is not consistent with the Government's up to date flood study. The updated flood study is the *Wianamatta South Creek Catchment Flood Study - Existing Conditions (Revision I).*
	EHG notes that a letter was sent to government agencies on 1 July 2022, including WPCA, advising of the updated flood study - the *Wianamatta South Creek Catchment Flood Study - Existing Conditions (Revision I)*. A copy of this advice is provided at Appendix B.
	
	Utilising the best available information for advice related to flood prone land is essential for councils and government agencies to access the exemption from liability afforded by Section 733 of the *Local Government Act 1993*.
	
	Compliance with Draft Development Control Plan
	• Given the sensitivity of the Wianamatta South Creek catchment due to flooding, as identified in the *Wianamatta South Creek Catchment Flood Study – Cumulative Impact Assessment*, there is significant potential for altered flood behaviour and associated impacts due to development including modification of the landform and other associated development within flood prone land (as defined above).
	• All development must demonstrate compliance with the flood related provisions and objectives of the Draft Aerotropolis Phase 2 DCP (Appendix A), s4.24 of Part 4.4 Chapter 4 of the State Environmental Planning Policy (Precincts—Western Parkland City), the Flood Prone Land Policy, the Floodplain Development Manual, and current Wianamatta South Creek flood studies
	  • *Wianamatta South Creek Catchment Flood Study - Existing Conditions* (*Rev I*) (2022)
	  • *Wianamatta South Creek Catchment Flood Study – Cumulative Impact Assessment* (2023)
	  • *Western Sydney Aerotropolis Precincts – Flood Impact Assessment* (2022).
	The master plan must outline a process for how objectives and the flood related provisions of the Draft DCP will be delivered through the appropriate approval pathway for each type of development within flood prone land.	

5 Technical Assessment – Post-Development Flood Conditions

5.1 Model Modifications to Reflect Proposed Development

In order to quantify the potential impacts of the proposed Bradfield City Centre development, the TUFLOW flood model that was developed to assess existing flood conditions across the site was modified to incorporate the post-development landform and proposed land use associated with the development proposal.

Three post-development design surfaces were provided by AECOM to represent the proposed landform at the Bradfield City Centre site. After discussions with AECOM, the modelled design surface was developed using a combination of the three provided surfaces as follows:

- 60646285-DESIGN-1000-RDW-TIN_20221122.dwg – to define the landform in the southern half of the Moore Gully channel and the roadway south of the Moore Gully opening.
- 60646285-REF-00-0000-CI-DESIGN-TRIANGLES_MooreGully_Entry.dwg – to define the landform in the northern half of the Moore Gully channel near the Moore Gully opening.
- 60646285-REF-00-0000-CI-DESIGN-TRIANGLES-PLAN_26062023.dwg – to define the landform in all other parts of the development.

The adopted design surface is shown in **Figure 6**, while the cut and fill required to implement the design surface is shown in **Figure 7**. Areas of cut and areas of fill are shown in shades of blue and red, respectively.

The design surface includes a realignment of Moore Gully within the site boundary. The proposed alignment of Moore Gully is about 50 metres south of the existing alignment. The design surface also includes a retaining wall along the eastern site boundary (refer **Figure 6**).

A temporary swale which runs in a north-south alignment along the western property boundary has also been included to convey flows southwards towards the new Moore Gully alignment until the land to the west is developed. The proposed road network includes a road along this western boundary.

Additionally, a waterway opening has been incorporated in the flood modelling at the point where this road crosses the drainage swale that drains the land to the north-west to Moore Gully (refer **Figure 6**).

Following some preliminary testing, some minor ponding was predicted to occur in a localised area upstream (west) of the road which runs along the western site boundary. Accordingly, two box culverts measuring 1.2 m (W) x 0.3 m (H) were included in the post-development TUFLOW model to alleviate the ponding in this area (refer **Figure 6**).

The TUFLOW flood model was also modified to represent the proposed changes in land use within the site boundary by incorporating a post-development version of the hydraulic roughness. It is envisaged that the development will result in an increase in impervious areas within the site boundary due to the future mixed use

/ enterprise areas. The hydraulic roughness delineation under post-development conditions is shown in **Figure 8**. The corresponding roughness coefficients (Manning's 'n') have previously been documented in **Table 2**.

Figure 6 - Design Land Surface for the Bradfield City Centre (*Source: AECOM*)

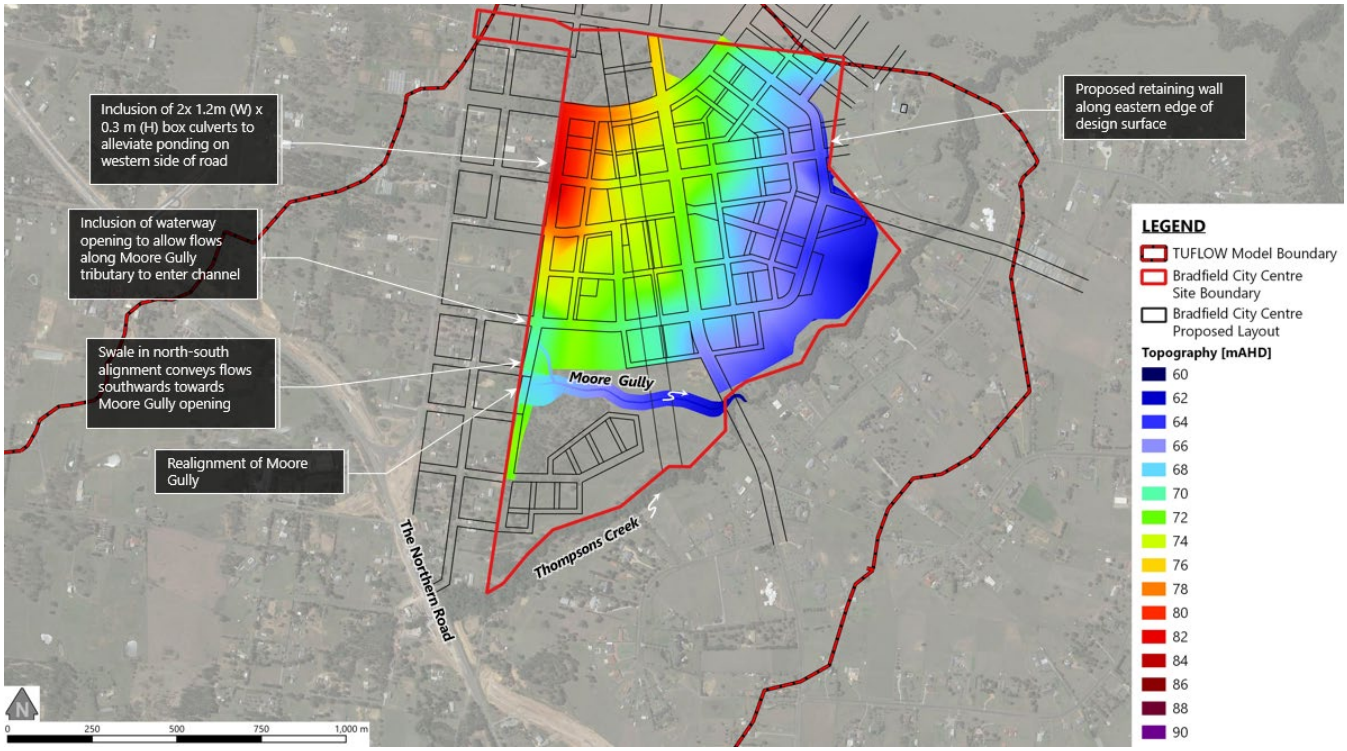


Figure 7 - Cut and Fill Earthworks Plan

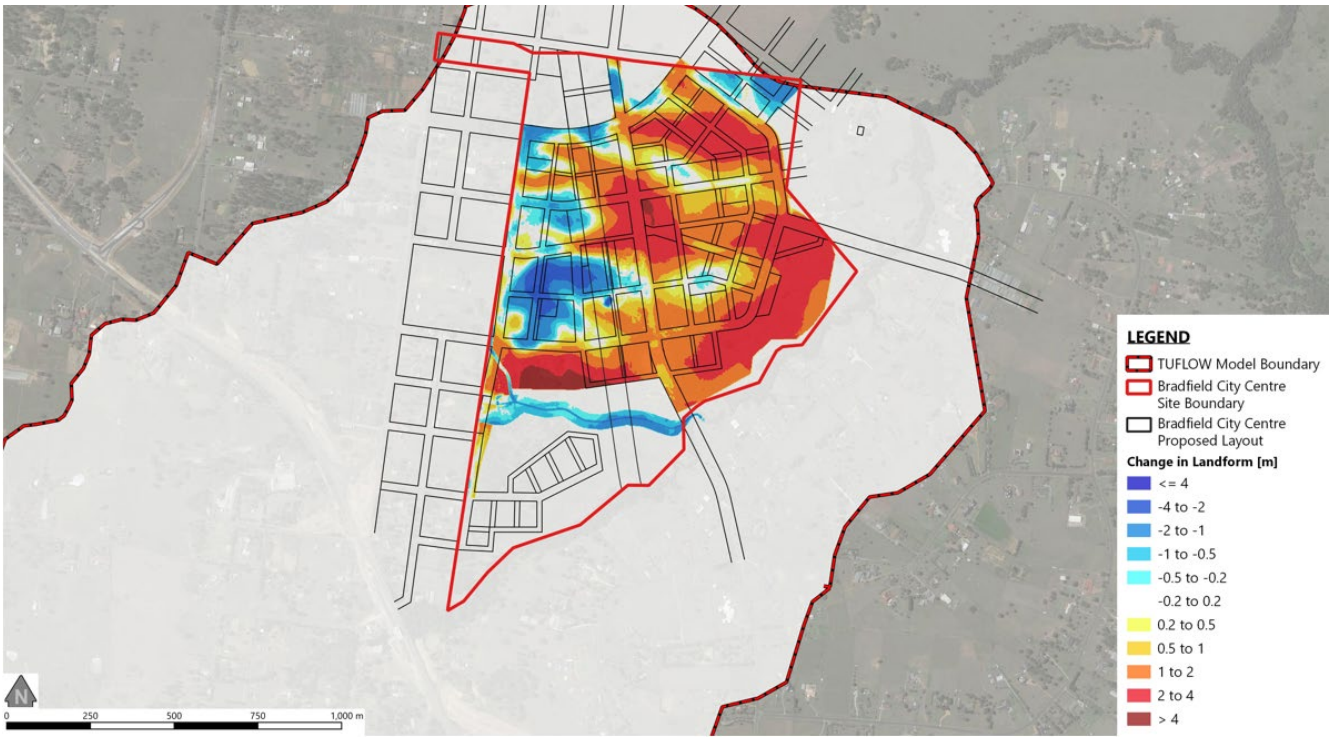
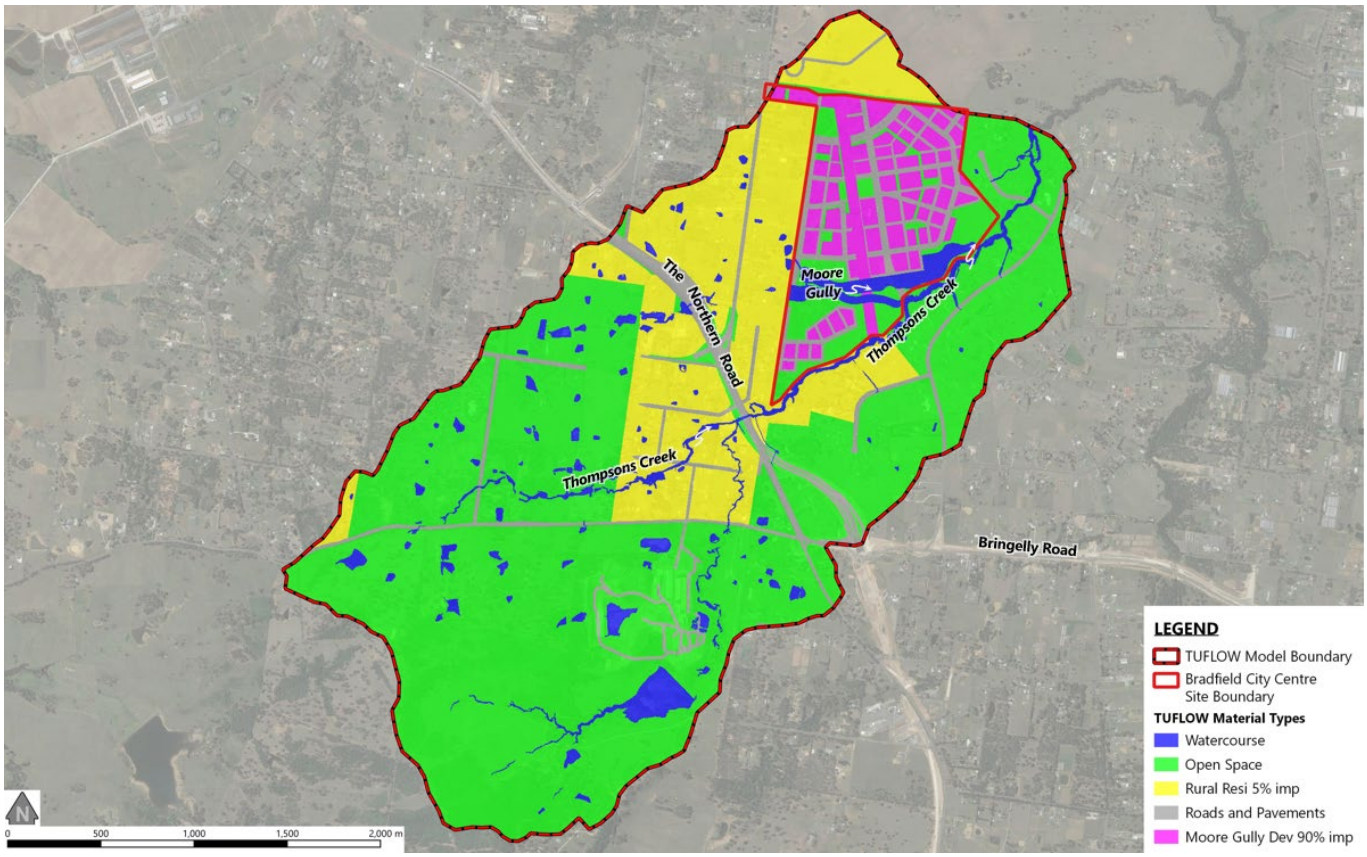


Figure 8 - TUFLOW Model Hydraulic Roughness Delineation (Post-Development Conditions)



5.2 Overview of Key Assumptions

An overview of the key assumptions adopted in the post-development flood modelling is provided in the following.

(i) It is understood that the land surrounding the Bradfield City Centre site will also be developed as part of the proposed development of the wider Western Sydney Aerotropolis. However, no details have been provided for the post-development landform in areas outside of the Bradfield City Centre site. Accordingly, the post-development version of the TUFLOW flood model has not included any changes to the existing landform in these areas.

(ii) It is also understood that work associated with the Western Sydney Aerotropolis project would lead to an increase in imperviousness in areas outside of the Bradfield City Centre. The increase in imperviousness in areas upstream of the Bradfield City Centre site would generate greater volumes of runoff when compared to existing conditions. It is anticipated that the greater volume of runoff would lead to flood level and flow velocity increases along major watercourses and flow paths which would not be associated with the Bradfield City Centre development. Accordingly, the post-development TUFLOW model has not included increases in imperviousness in areas outside of the Bradfield City Centre site. Therefore, the assessment only considers the flood impacts which would arise solely from the Bradfield City Centre development.

(iii) It is understood that Sydney Water plans to provide detention systems to mitigate the additional runoff which would be generated due to the increase in imperviousness across the wider Western Sydney

Aerotropolis development. The details of these detention systems were not available at the time of writing.

(iv) The proposed stormwater drainage network within the Bradfield City Centre development has not been provided and therefore has not been included in the post-development TUFLOW model.

5.3 Flood Modelling Results for Post-Development Conditions

The modified flood model was used to simulate the 1% AEP flood in order to assess the flood behaviour at the site under post-development conditions. Flood mapping for Thompsons Creek and Moore Gully under post-development conditions is presented in **Appendix 1**, including mapping of peak flood depths, levels, velocities, and hazards. All mapping is presented superimposed over the proposed Bradfield City Centre site boundary and proposed lot and road layouts.

The following flood mapping has been provided:

- **Figure A5**: Peak flood depths during the 1% AEP event (post-development conditions)
- **Figure A6**: Peak flood levels during the 1% AEP event (post-development conditions)
- **Figure A7**: Peak flow velocities during the 1% AEP event (post-development conditions)
- **Figure A8**: ARR 2019 flood hazard categories during the 1% AEP event (post-development conditions)

The flood model results show that the predicted flood behaviour along Thompsons Creek and the section of Moore Gully upstream of the Bradfield City Centre site are relatively similar to existing conditions. The results also indicate that the new channel for Moore Gully is able to effectively convey the 1% AEP peak flow towards Thompsons Creek.

Runoff within the Bradfield City Centre is generally concentrated along the road network and flows to the east and south towards Thompsons Creek.

6 Impacts and Mitigation Assessment

The magnitude and location of any changes in flood behaviour arising from the proposed Bradfield City Centre development is established by comparing the results generated from flood simulations for the existing and post-development scenarios.

6.1 Impact on Peak Flood Levels

Flood level difference mapping was prepared from the modelling results to quantify any off-site impacts that could be caused by the proposed development. Difference maps are created by comparing peak flood level estimates at each grid cell in the flood model from the results of simulations undertaken for both existing and post-development scenarios. This effectively creates a contour map of predicted changes in peak flood levels (i.e., increases and decreases) and allows visual assessment of the impact of the development on existing peak flood levels.

Flood level difference mapping was developed and is presented in **Figure A9**. As shown in the legend, increases in peak flood level are represented as different shades of red and decreases in peak flood level are represented as shades of blue. The white shading indicates changes in peak flood level that are between +/- 0.01 metres, which is considered to correspond to no change.

As shown in **Figure A9**, the proposed Bradfield City Centre development is predicted to result in some minor changes to peak 1% AEP flood levels on land that is outside the development boundary. These locations are as follows (refer **Figure A9**).

- Off-site Impact 1: increases in peak flood levels near to and downstream of the confluence of Moore Gully and Thompsons Creek.
- Off-site Impact 2: increases in peak flood levels and extents downstream of the retaining wall at the eastern boundary of Bradfield City Centre.

It is noted that Off-site Impact 1 is predicted to occur primarily in the riparian corridor of Thompsons Creek. The flood level increases in this area typically range from 0.02 to 0.04 metres, up to a maximum of 0.06 metres in localised areas. However, it is important to note that these flood level increases are predicted to occur on land which has been designated for 'Local Open Space and Drainage' and/or 'Stormwater Infrastructure' as per the Land Reservation Acquisition Map for the Western Parkland City State Environmental Planning Policy.

Additionally, overland flows travelling eastward along the road network are predicted to overtop the kerb and gutter system and spill over the retaining wall before flowing into Thompsons Creek. These overtopping flows are predicted to cause Off-site Impact 2, comprising flood level increases in localised areas of up to 0.06 metres.

6.2 Impact on Peak Flow Velocities

A difference map was also created to quantify any changes on peak flow velocities associated with the proposed Bradfield City Centre development. The velocity difference mapping that was developed for the 1% AEP flood is presented in **Figure A10**.

The proposed development is also predicted to result in some changes to floodwater flow velocities outside of the Bradfield City Centre boundary at the locations of Off-site Impact 3 and Off-site Impact 4.

Off-site Impact 3 occurs within the Moore Gully channel just upstream of the Bradfield City Centre site boundary. Increases in flow velocity of up to 0.25 m/s are predicted to occur at this location. It is noted that this increase to flow velocities is confined to a very localised area and does not extend outside of the Moore Gully channel.

Increases in flow velocity of up to 0.22 m/s are predicted in localised areas east of the retaining wall at the location of Off-site Impact 4. These increases to flow velocity are also attributed to overland flows overtopping the kerb and gutter system at the eastern edge of the development and spilling over the retaining wall.

6.3 Impact on Flood Hazard

Peak 1% AEP flood hazard mapping was prepared for the post-development scenario and is shown in **Figure A8**. Comparison of **Figure A4** and **Figure A8** shows that only minimal changes are predicted to the flood hazard classification. Flood hazards are predicted to remain between H1 and H3 along Moore Gully and within the Bradfield City Centre site boundary.

6.4 Recommendations

The Bradfield City Centre development is not expected to result in any broadscale change to flood behaviour along Thompsons Creek or along Moore Gully upstream of the site. The difference mapping shown in **Figure A9** and **Figure A10** shows that the proposed Bradfield City Centre is predicted to cause some flood level and flow velocity increases. However, the results of the post-development flood modelling shows that these impacts are limited to localised areas just adjacent to the site boundary or do not extend outside of the riparian corridors of Moore Gully and Thompsons Creek.

Off-site Impact 1 comprises flood level increases of up to 0.06 metres which typically occur within the Thompsons Creek riparian corridor. Moreover, these impacts are predicted to occur on land which has been designated as 'Local Open Space and Drainage' and/or 'Stormwater Infrastructure' in the State Environmental Planning Policy (Western Parkland City) 2021 Land Reservation Acquisition Map.

The 1% AEP flood level increases predicted near the Thompsons Creek / Moore Gully confluence range between 0.03 and 0.06m. Increases of this magnitude exceed those typically accepted as being within the accuracy of the modelling or data on which the modelling relies on. However, the location and extent of the predicted increases occur on land which is designated as 'Local Open Space and Drainage' and/or 'Stormwater Infrastructure' on the Land Reservation Acquisition Map that accompanies State Environmental Planning Policy (Western Parkland City) 2021.

Hence, the predicted increases in 1% AEP flood level and any associated increase in the frequency of flooding of the land will not manifest to cause an adverse impact to the future use of the affected land. Moreover, the affected land will be dedicated to open space and/or a drainage function, and therefore the future use is compatible with or can be tailored to accommodate the predicted increase in flood affectation. Therefore,

these impacts are considered to be acceptable as they do not increase flood levels in privately owned land.

The design and implementation of a stormwater drainage network to service the proposed roadways would serve to capture some of the runoff flowing eastward and southwards towards Thompsons Creek. It is likely that this would reduce or prevent runoff from overtopping the kerb and gutter system near the eastern site boundary and spilling over the retaining wall. Accordingly, the implementation of a stormwater drainage network could mitigate the flood level and flow velocity increases associated with Off-site Impact 2 and Off-site Impact 4.

The localised off-site impact within the Moore Gully channel just upstream of the site (Off-site Impact 3) could be mitigated through further refinement of the post-development landform. Refinements to the design land surface should aim to allow greater conveyance of flow along Moore Gully and the tributary that drains the catchment to the north-west of the site.

It is noted that the post-development model included a number of features which are important in allowing flows to drain efficiently into the site.

- A waterway opening which allows flows from the Moore Gully tributary to enter the channel at the western site boundary;
- A swale in a north-south alignment which conveys flows southward towards the Moore Gully opening near the western site boundary; and
- A set of two box culverts measuring 1.2 m (W) x 0.3 m (H) at the western site boundary which alleviates minor local ponding on the upstream (western) side of the road.

It is noted that these features should be included in the post-development landform for the next design stage. The omission of these features would likely lead to flood level or flow velocity increases outside of the Bradfield City Centre site boundary.

The locations of these features have been shown in **Figure 6**.

The recommendations described above are summarised in **Table 5**.

Table 5 - Recommendations

Ref	Recommendation	Timeframe	Responsible
1	Further refinement of the post-development landform along the new Moore Gully alignment to allow greater conveyance of flows along Moore Gully.	Prior to relevant planning approval	WPCA
2	Further refinement of the design surface to include a waterway opening to allow flows from the catchment to the north-west of the site to enter Moore Gully.	Prior to relevant planning approval	WPCA
3	Further refinement of the design surface to include a north-south swale along the western site boundary to convey flows into Moore Gully	Prior to relevant planning approval	WPCA
4	Inclusion of culverts at the western site boundary to alleviate local ponding on the western side of the road.	Prior to relevant planning approval	WPCA
5	Design and implementation of a stormwater drainage network to cater for ponding and flows along the	Prior to relevant	WPCA

	proposed roadways and to prevent overtopping of the road formation at the eastern edge of the development.	planning approval

7 Conclusions

An assessment of the potential impacts of the Bradfield City Centre development on existing flood behaviour was undertaken using a TUFLOW flood model of the Thompsons Creek and Moore Gully catchments. The TUFLOW model was used to simulate existing flood conditions in the vicinity of the Bradfield City Centre and to assess the impact of the proposed development on those flood conditions. The impacts were quantified by comparing peak flood characteristics under post-development conditions against peak flood characteristics under existing conditions.

The following conclusions can be drawn from the assessment:

- The proposed Bradfield City Centre development is not expected to result in any significant impact on existing flood behaviour along Thompsons Creek or along sections of Moore Gully upstream of the site. Off-site impacts are restricted to localised areas immediately adjacent to the development site or otherwise do not extend outside of the riparian corridors of Thompsons Creek and Moore Gully.
- The proposed Bradfield City Centre development is predicted to lead to an increase in 1% AEP flood along Thompsons Creek near to and downstream of its confluence with Moore Gully (Off-site Impact 1 in **Figure A9**). The peak flood levels are expected to typically increase by 0.02 to 0.04 metres and up to a maximum of 0.06 metres in some localised areas. However, this impact does not extend outside of the Thompsons Creek riparian corridor. Furthermore, these impacts occur on land which is designated as 'Local Open Space and Drainage' and/or 'Stormwater Infrastructure' in the State Environmental Planning Policy (Western Parkland City) 2021 Land Reservation Acquisition Map.
- The proposed Bradfield City Centre development is predicted to lead to a localised increase in 1% AEP flood level and extent in the area to the north-east of the site (refer to Off-site Impact 2 in **Figure A9**). A flood level increase of up to 0.06 metres is predicted in this area. This increase in flood level is predicted to occur along an overland flow path that drains to Thompsons Creek and is caused by stormwater runoff overtopping the road formation that has been designed to service the north-eastern section of the site.
- The proposed Bradfield City Centre development is expected to lead to a very localised increase in flow velocity within the Moore Gully channel just upstream of the site boundary. A flow velocity increase of up to 0.25 m/s is predicted in this area. However, this impact occurs in a very localised area and is confined within the Moore Gully channel.
- The proposed Bradfield City Centre development is expected to lead to a localised increase in flow velocities (Off-site Impact 4) near the location of Off-site Impact 2. A flow velocity increase of up to 0.22 m/s is predicted in this area. This impact is also caused by stormwater runoff overtopping the proposed road formation and spilling over a retaining wall that is currently proposed along the north-eastern site boundary.
- The proposed Bradfield City Centre development is not predicted to lead to any material changes to the flood hazard in the vicinity of the site.

Due to the limited extent of the flood impacts, it is anticipated that they can be mitigated through further refinement of the post-development landform near the precinct boundaries as well as incorporation of the stormwater drainage network that is proposed to service the site. Notwithstanding, in order to ensure that these off-site impacts are minimised, it is recommended that the following be undertaken during the next phase of the concept design:

1. The design land surface for the Bradfield City Precinct should be further refined along the western site boundary near the new Moore Gully alignment. The refined land surface should allow for greater conveyance of flow in an easterly direction along Moore Gully and from the north-western tributary that drains to it. The refined land surface should allow for a waterway opening to allow flows from

the catchment to the north-west of the site to enter Moore Gully. The refined land surface should also allow for a swale in a north-south alignment along the western site boundary to convey flows into Moore Gully. The exclusion of these features will likely lead to increases in flood level and/or flow velocity in areas outside of the site boundary.

2. The design should also allow for a set of culverts along the western site boundary to alleviate local ponding on the western side of the road.

3. A stormwater drainage network should be designed and installed to alleviate the ponding of runoff in the streets of the proposed development. This will serve to reduce the magnitude and extent of Off-site Impacts 2 and 4.

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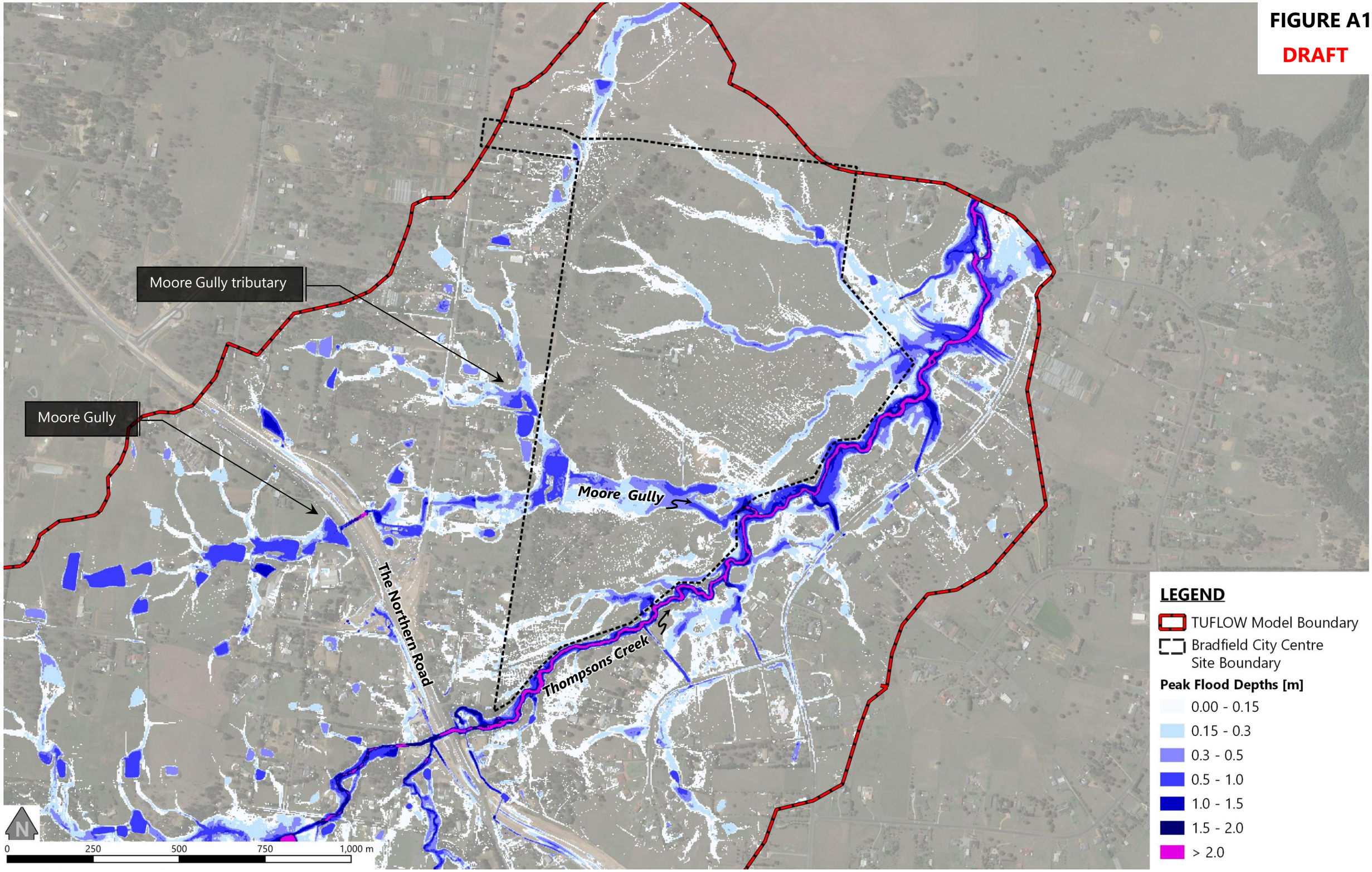
Appendix 1

1% AEP Flood Mapping for Existing and Post-Development Conditions

FIGURE A1

DRAFT



Prepared by:

Advisian

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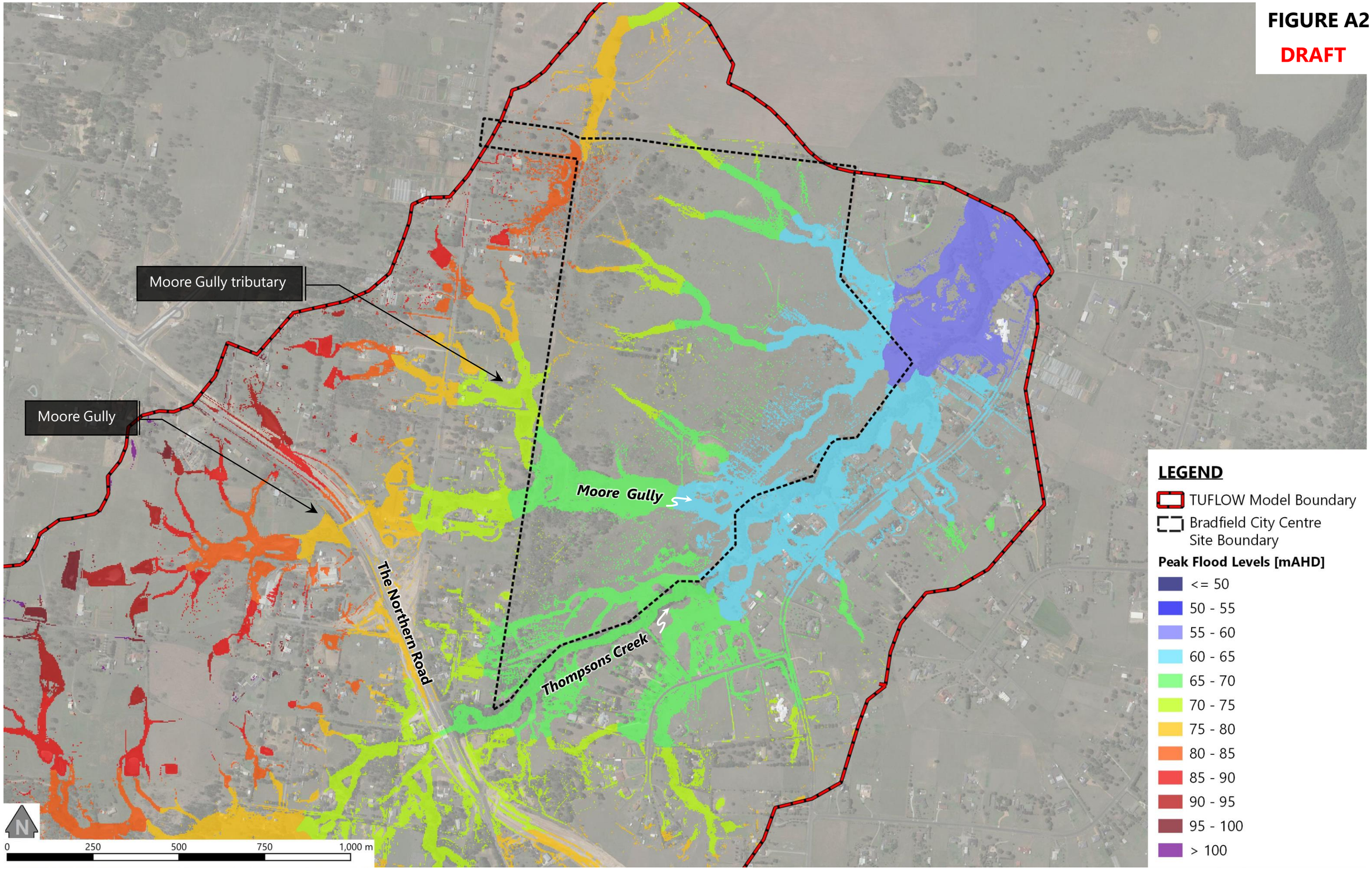
PEAK FLOOD DEPTHS DURING THE 1% AEP EVENT [EXISTING CONDITIONS]

FIGURE A2

DRAFT



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PEAK FLOOD LEVELS DURING THE 1% AEP EVENT [EXISTING CONDITIONS]

FIGURE A3

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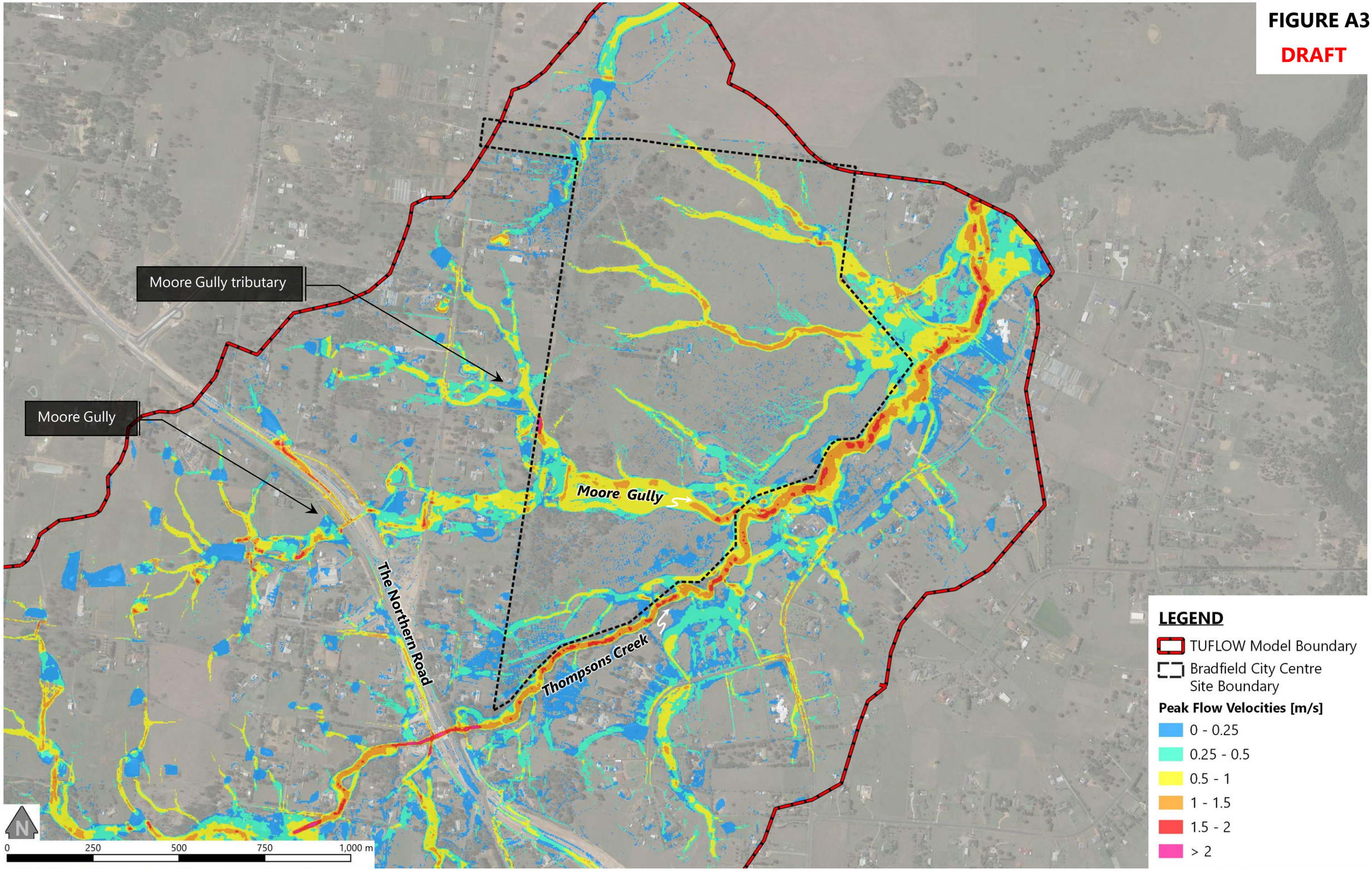

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PEAK FLOW VELOCITIES DURING THE 1% AEP EVENT [EXISTING CONDITIONS]

FIGURE A4

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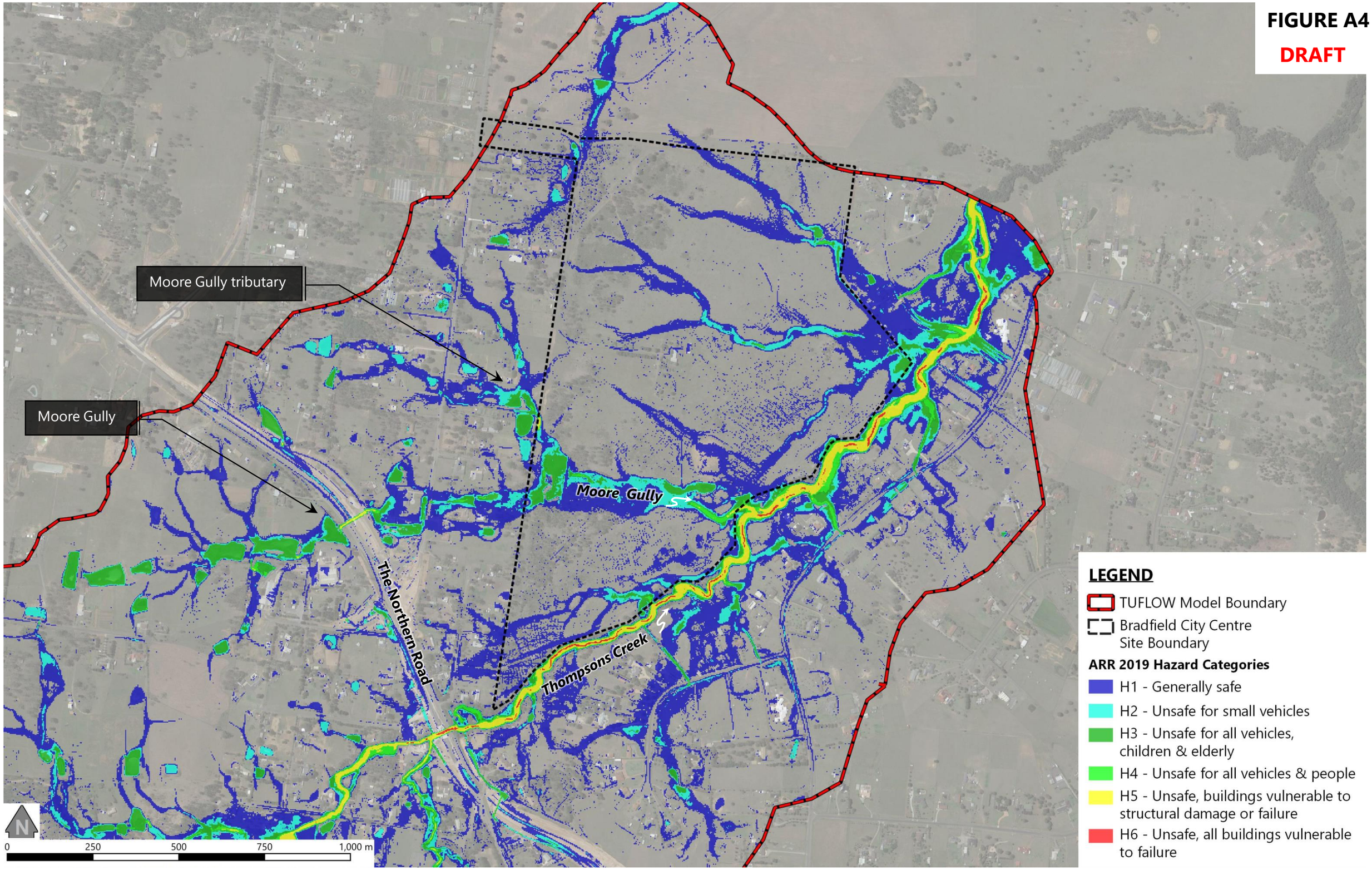

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ARR2019 FLOOD HAZARD CATEGORIES DURING THE 1% AEP EVENT [EXISTING CONDITIONS]

FIGURE A5

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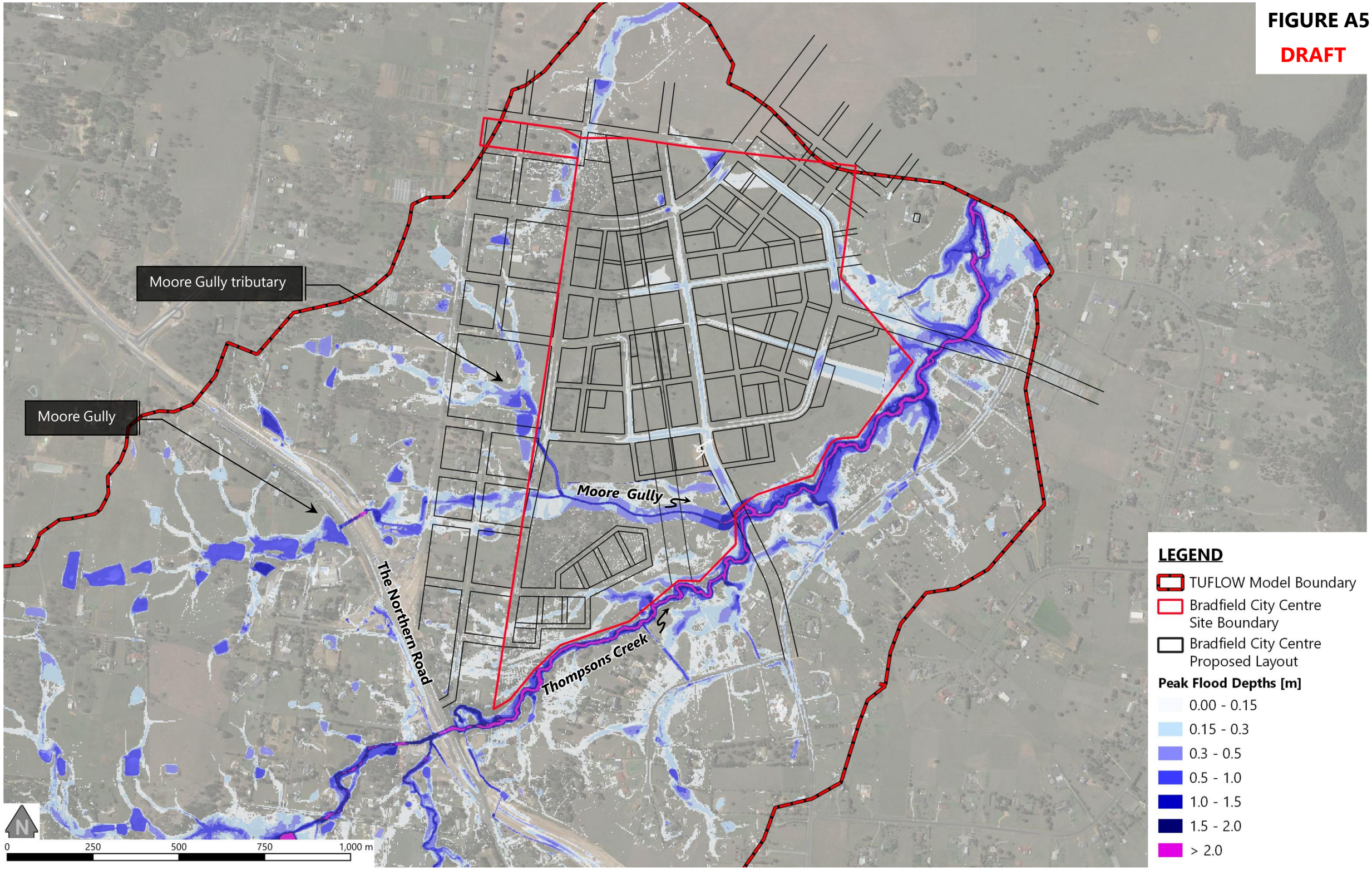

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PEAK FLOOD DEPTHS DURING THE 1% AEP EVENT [POST-DEVELOPMENT CONDITIONS]

FIGURE A6

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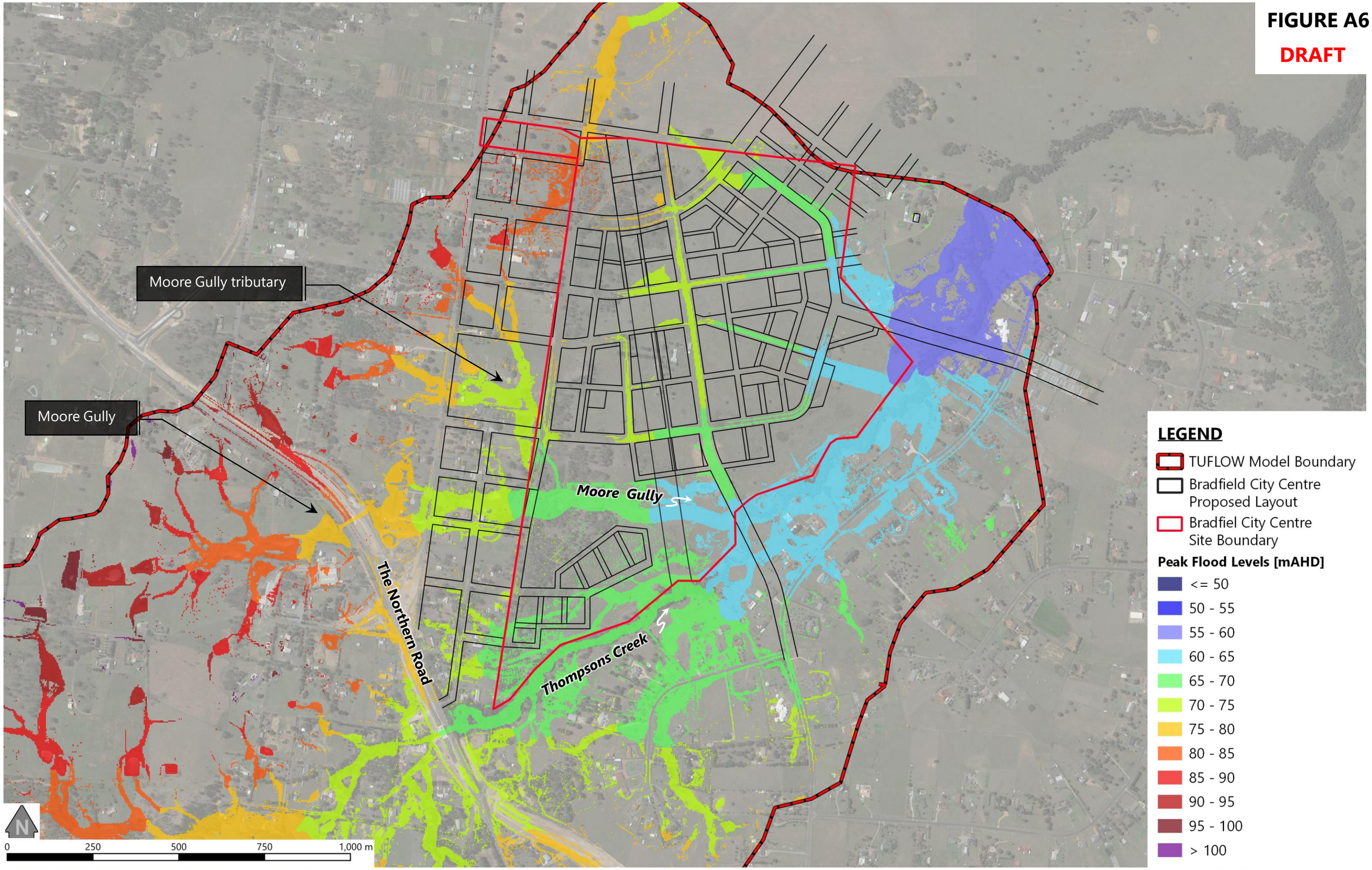

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PEAK FLOOD LEVELS DURING THE 1% AEP EVENT [POST-DEVELOPMENT CONDITIONS]

FIGURE A7

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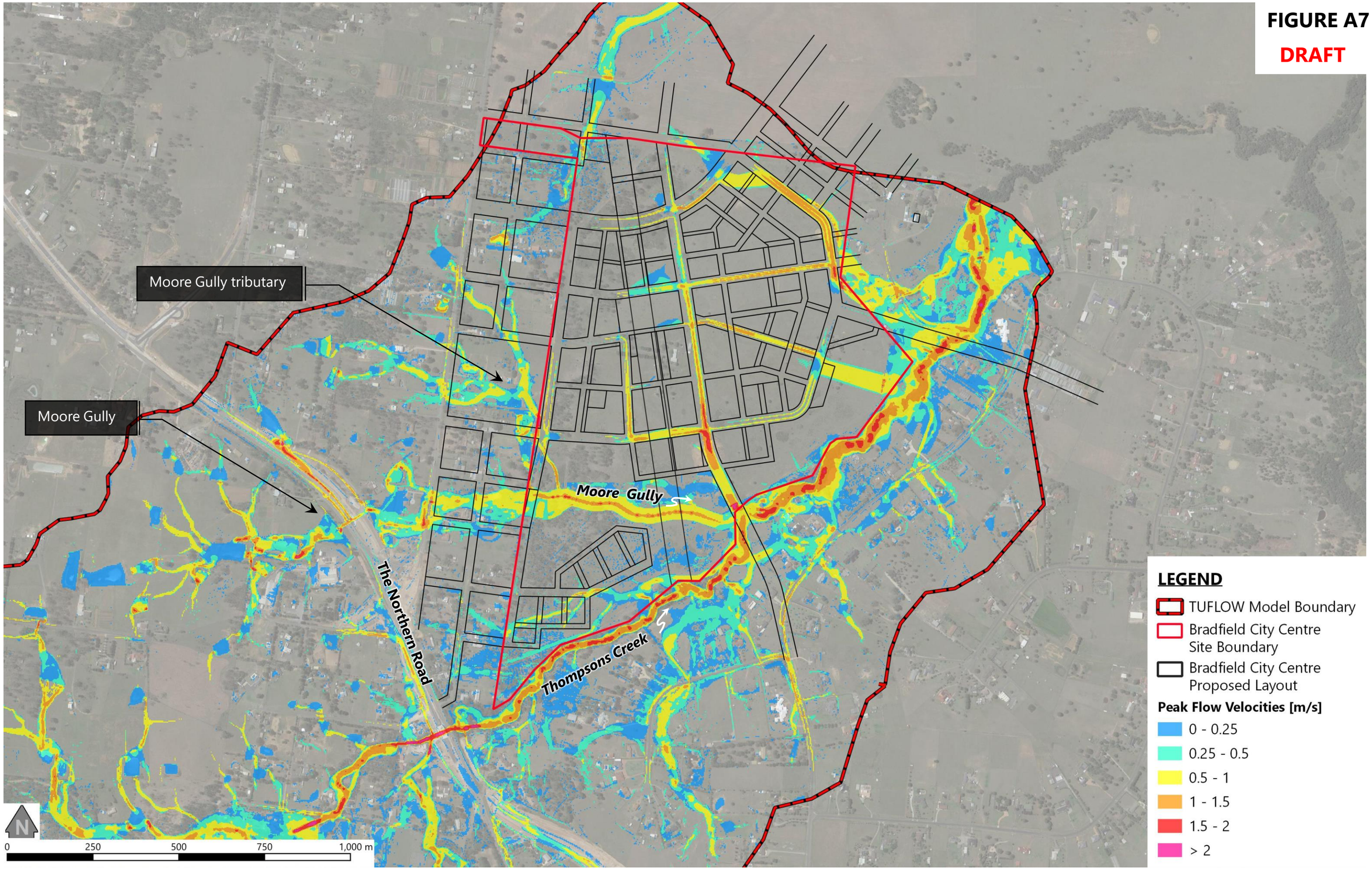

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PEAK FLOW VELOCITIES DURING THE 1% AEP EVENT [POST-DEVELOPMENT CONDITIONS]

FIGURE A8

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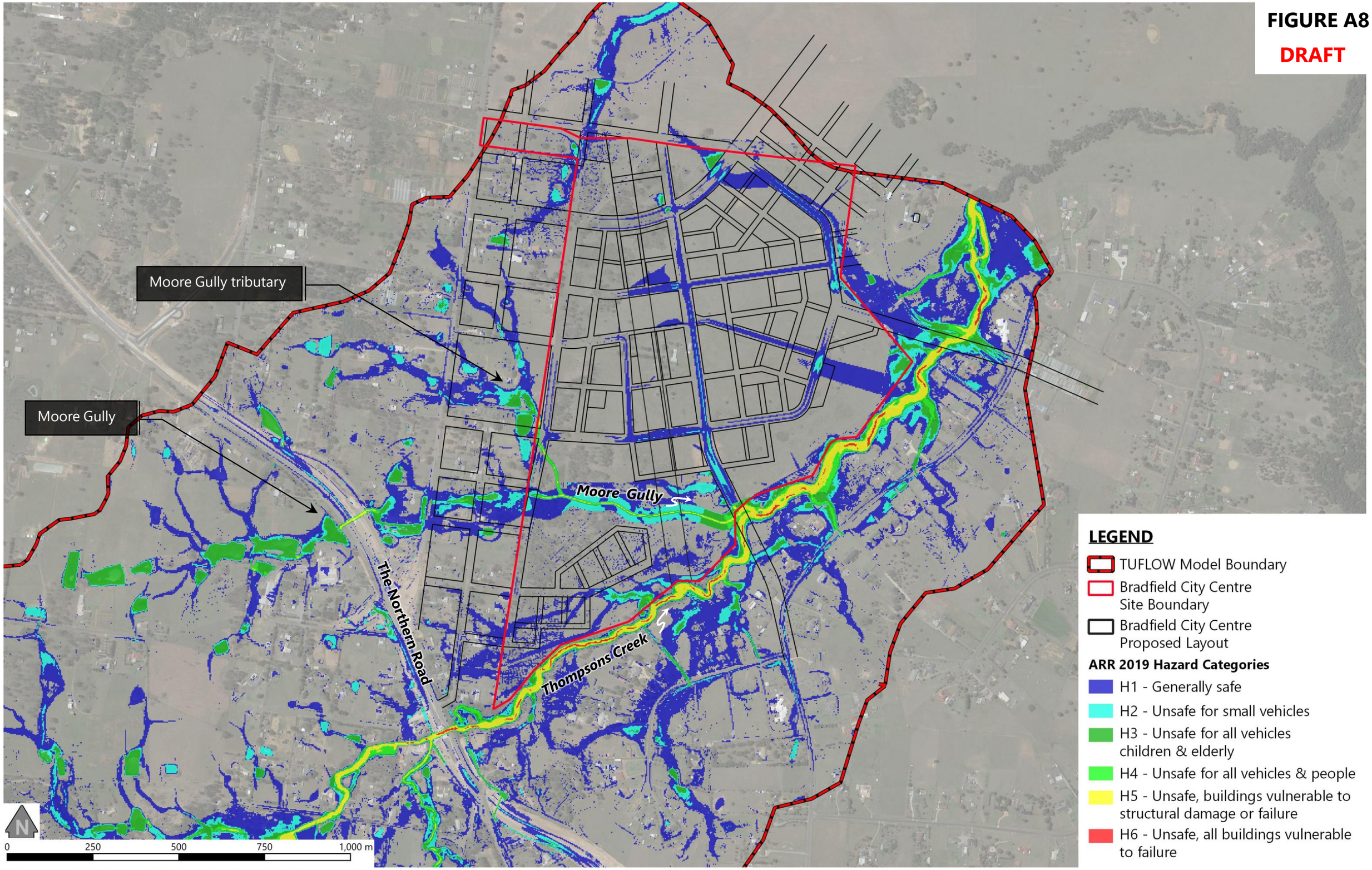

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ARR2019 FLOOD HAZARD CATEGORIES DURING THE 1% AEP EVENT [POST-DEVELOPMENT CONDITIONS]

FIGURE A9

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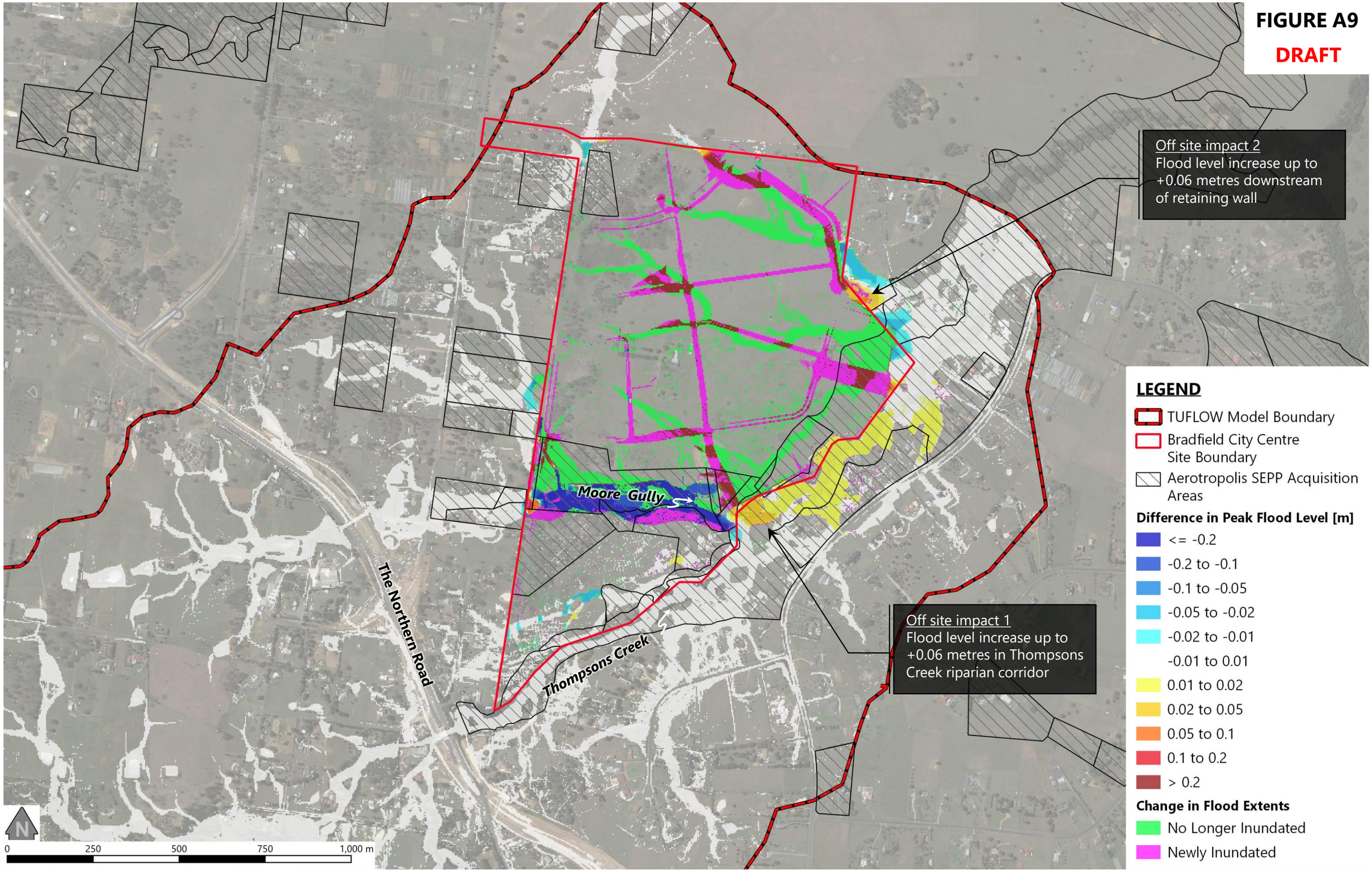

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IMPACT OF THE PROPOSED DEVELOPMENT ON PEAK FLOOD LEVELS [1% AEP EVENT]

FIGURE A10

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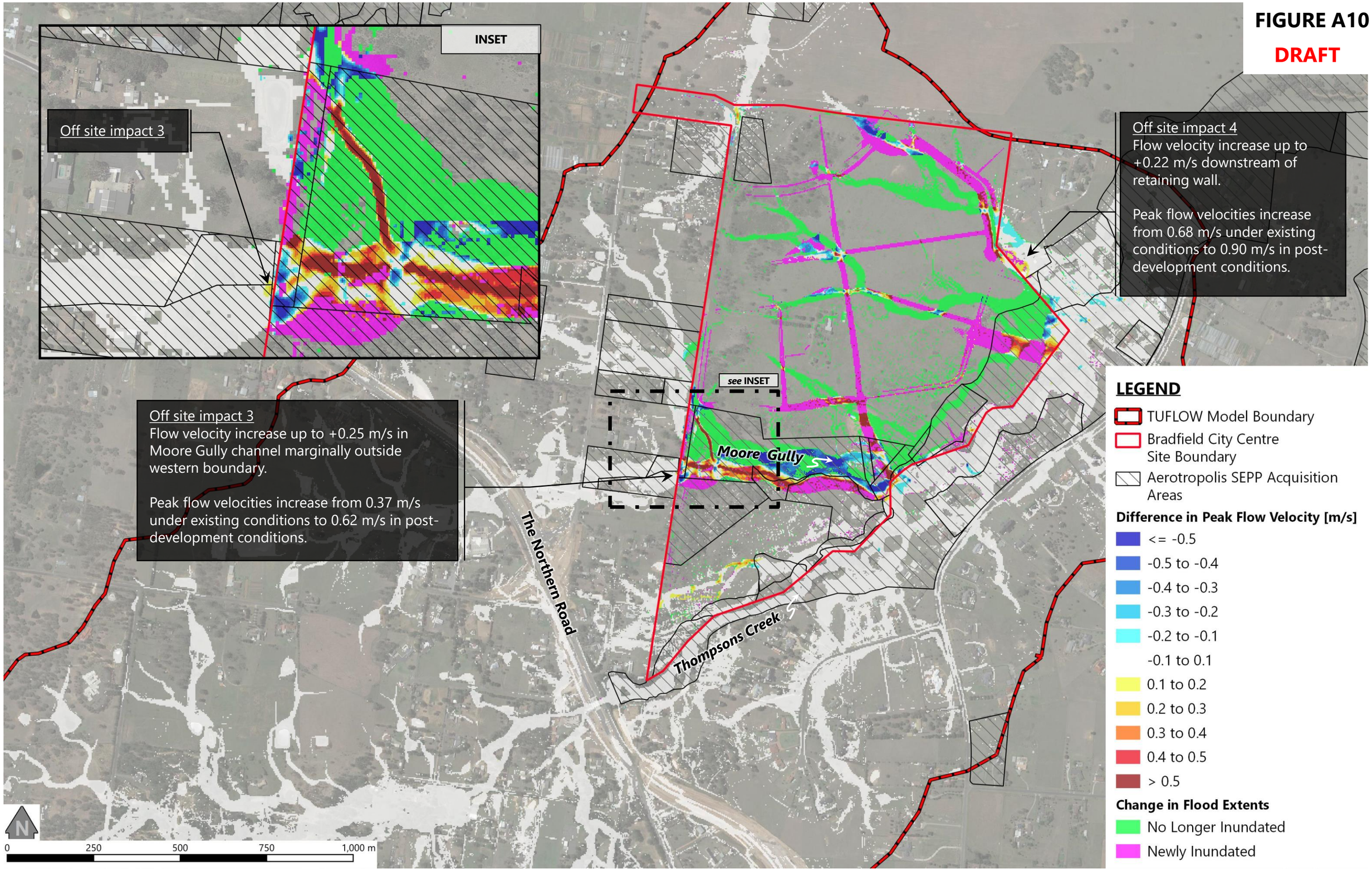

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IMPACT OF THE PROPOSED DEVELOPMENT ON PEAK FLOW VELOCITIES [1% AEP EVENT]

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NSW GOVERNMENT

APPENDIX B

20230913 Biodiversity Strategy and Impact Assessment

Western Parkland City Authority

Bradfield City Centre
Master Plan Application

Biodiversity Strategy and Impact Assessment

Prepared by Biosis

September 2023

wpca.sydney

NSW GOVERNMENT

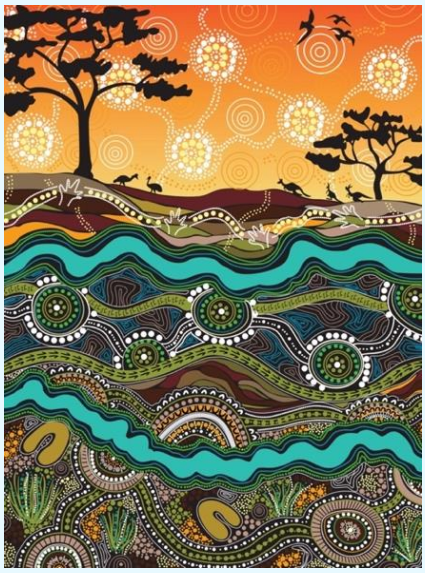
Acknowledgement of Country

Aboriginal people have had a continuous connection with the Country encompassed by the Western Parkland City (the Parkland City) from time immemorial. They have cared for Country and lived in deep alignment with this important landscape, sharing and practicing culture while using it as a space for movement and trade.

We Acknowledge that four groups have primary custodial care obligations for the area: Dharug/Darug, Dharawal/Tharawal, Gundungurra/Gundungara and Darkinjung. We also Acknowledge others who have passed through this Country for trade and care purposes: Coastal Sydney people, Wiradjuri and Yuin.

Western Sydney is home to the highest number of Aboriginal people in any region in Australia. Diverse, strong and connected Aboriginal communities have established their families in this area over generations, even if their connection to Country exists elsewhere. This offers an important opportunity for the future of the Parkland City.

Ensuring that Aboriginal communities, their culture and obligations for Country are considered and promoted will be vital for the future of the Parkland City. A unique opportunity exists to establish a platform for two-way knowledge sharing, to elevate Country and to learn from cultural practices that will create a truly unique and vibrant place for all.



Garungarung Murri Murri Nuru
(Beautiful Grass Country)
Artwork created by Dalmarri artists Jason Douglas and Trevor Eastwood for the Western Parkland City Authority

Version	Status	Date	Prepared By	Reviewer	Comments
DFT01	*Draft*	*18/02/2022*	*Biosis*	*Rebecca Dwyer*	*Report at 60 % completion.*
DFT02	*Draft*	*21//03/2022*	*Biosis*	*Rebecca Dwyer*	*Full draft (minus DCP tables)*
DFT03	*Draft*	*28/03/2022*	*Biosis*	*Jane Raithby-Veall*	*DCP tables only*
DFT04	*Draft*	*11/11/2022*	*Biosis*	*Matthew Hyde*	*Updated study template and issue of final Master Plan requirements*
DFT05	*Draft*	*24/11/2022*	*Biosis*	*Matthew Hyde*	*Reviewing comments from WPCA*
DFT06	*Draft*	*19/06/2023*	*Biosis*	*Jane Raithby-Veall*	*Updated report template. Final Master plan footprint and associated updates.*
FNL01	*Final*	*30/06/2023*	*Biosis*	*Matthew Hyde*	*Reviewing comments from WPCA. Updated mapping. Preparation of final version.*
FNL02	*Final*	*02/08/2023*	*Biosis*	*Jane Raithby-Veall*	*Updates to development footprint.*
FNL03	*Final*	*13/09/2023*	*WPCA*	*Jason Azucena*	*Update to Table 1*

Executive Summary

Biosis Pty Ltd was commissioned by the Western Parkland City Authority (WPCA) to undertake a biodiversity assessment to support the approval of Stage 1 of the Bradfield City Centre Master Plan. This Master Plan outlines a mixed-use development, comprising industrial, commercial, open space and residential uses for a 115-hectare site centred on a new Sydney Metro station. This site is located off 215 Badgerys Creek Road, Bringelly in New South Wales (NSW) (the study area).

The current assessment takes the form of a Biodiversity Strategy and Impact Assessment, with the assessment outlining the key ecological values likely to occur within the study area, the impacts associated with the proposed Master Plan, key biodiversity legislation applicable to the Master Plan, and recommendations to avoid, mitigate or offset the proposed development.

The assessment included a desktop review of the study area to determine the ecological values likely to be present within the Master Plan area, as well as a field assessment of the subject site to determine the existing biodiversity values of the site. A subsequent aquatic assessment of Moore Gully, a Strahler order 4 watercourse that occurs within the study area was also undertaken. Finally, an additional field assessment was undertaken to collect vegetation plot data to calculate vegetation condition in key locations across the site.

Ecological values

The assessment identified the following key ecological values within the study area:

- 37.15 ha of native vegetation conforming with six Plant Community Types (PCTs) providing habitat for native flora and fauna.
- Seven Threatened Ecological Communities (TECs) listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and/or the NSW *Biodiversity Conservation Act 2016* (BC Act):
  - *Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion* (Critically Endangered Ecological Community [CEEC], EPBC Act; and Endangered Ecological Community [EEC], BC Act).
  - Freshwater wetlands on coastal floodplains of the NSW North Coast, Sydney Basin and South-East Corner bioregions (EEC, BC Act).
  - River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria (CEEC, EPBC Act) and the equivalent River-flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South-East Corner Bioregions (EEC, BC Act).
  - Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest (CEEC, EPBC Act).
  - Cumberland Plain Woodland in the Sydney Basin Bioregion (Critically Endangered, BC Act).
  - Sydney Freshwater Wetlands in the Sydney Basin Bioregion (EEC, BC Act).
  - Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South-East Queensland (EEC, EPBC Act) and the equivalent Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South-East Corner Bioregions (EEC, BC Act and EPBC Act).

- Seven threatened flora species and 19 threatened fauna species listed under the Commonwealth EPBC Act or NSW BC Act identified as having a medium or greater likelihood of occurrence.
- 14 hollow-bearing trees representing potential habitat for native fauna.
- One population, comprising four individuals of threatened flora species *Marsdenia viridiflora* subsp. *viridiflora* (Endangered population, BC Act), located directly adjacent to the study area.
- Creeks, wetlands and dams providing habitat for native biota:
  - Thompsons Creek, a Strahler order five watercourse occurring outside the study area along its eastern boundary. Parts of its associated riparian corridor and key fish habitat buffer partially occur within the study area.
  - Moore Gully Creek, a Strahler order four watercourse and its associated riparian corridors and key fish habitat buffers.
  - Two wetlands supporting TECs and representing potential native species habitat.
  - Four farm dams supporting native vegetation and representing potential native aquatic fauna habitat.

The study area occurs within land to which Chapter 4 (Western Sydney Aerotropolis) of *State Environmental Planning Policy (Precincts – Western Parkland City) 2021* applies. As such the study area is subject to the controls detailed within this chapter of the SEPP. However, the study area also occurs within the South-West Growth Centre as defined under Chapter 3 (Sydney region growth centres) of *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*. The majority of the study area (113.72 hectares or 99 %) is mapped as "certified" under the Draft Growth Centres Conservation Plan (Growth Centres Commission 2007) and has been granted biodiversity certification under the BC Act due to the effect of the Order to confer biodiversity certification on the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*. Biodiversity certification removes the need for further assessment of threatened species under the NSW BC Act prior to development of certified land. This biodiversity certification also applies to EPBC Act Matters of National Environmental Significance due to the endorsement of the Sydney Growth Centres Strategic Assessment Program Report (State of NSW 2010) by the Commonwealth Environment Minister.

Impacts associated with the Master Plan

The proposed Master Plan development will result in impacts to the following ecological values:

- Removal of 24.60 ha native vegetation from the development footprint, which includes areas of potential threatened flora and fauna habitat. This native vegetation has been previously mapped as certified.
- Minor impacts within the remaining 12.47 ha of native vegetation which occurs within areas set aside for open space. These impacts are expected to be minimal as native vegetation in open spaces is expected to retain much of its existing characteristics and functionality.
- Removal of 11 hollow-bearing trees within the study area supporting a total of 21 hollows of small (<50 mm diameter) or medium (50 – 149 diameter) size classes.
- Impacts to two sections of Moore Gully and its associated Vegetated Riparian Zone (VRZ) and key fish habitat buffer, associated with future transit corridors at the eastern and western extent of the study area.
- Minor encroachment into the key fish habitat buffer associated with Thompsons Creek.
- Impacts to five unnamed Strahler order one watercourses and one unnamed Strahler order two watercourse and their associated VRZs.
- Impact to one farm dam.

All impacts to native vegetation and threatened flora and fauna are restricted to areas which have been

granted biodiversity certification. As such further assessment in the form of Tests of Significance are not required. Impacts do not trigger the Biodiversity Offset Scheme (BOS) and subsequent assessment in the form of a Biodiversity Development Assessment Report (BDAR) or Species Impact Statement (SIS) is not required. No referral for impacts to Matters of National Environmental Significance are required.

Impacts to Moore Gully and its associated key fish habitat buffer and the unnamed watercourses across the study area will require liaison with the fisheries division of the Department of Primary Industries (DPI) and the Natural Resources Access Regulator (NRAR). The VRZ of these watercourses will need to be observed and a controlled activity permit secured for any works within 40 metres of these features.

Recommendations

Whilst additional biodiversity assessment is not required, this report makes several recommendations to avoid, mitigate and offset impacts to biodiversity. The primary measure for any future developments within the study area is to minimise removal of native vegetation and habitat and avoid disruption to existing riparian corridors. Where clearing is unavoidable, development should be designed to retain areas of high-quality vegetation wherever possible. Additional recommendations are detailed within **Section 7** and include detailed design recommendations, exclusion fencing and recommendations regarding appropriate vegetation clearing practices, staged habitat removal, supervision of habitat clearance and the installation of replacement habitat.

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Glossary of Terms

AAWSF	Aerotropolis Aviation Wildlife Safeguarding Framework
APZ	Asset Protection Zone
AS	Australian Standard
Aerotropolis	Western Sydney Aerotropolis
BAM	Biodiversity Assessment Method
BC Act	*Biodiversity Conservation Act 2016*
BDAR	Biodiversity Development Assessment Report
Biosecurity Act	*Biosecurity Act 2015*
BOS	Biodiversity Offset Scheme
CEEC	Critically Endangered Ecological Community
CPCP	Cumberland Plain Conservation Plan
DA	Development Application
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
DNG	Derived native grasslands
DNS	Derived native shrublands
DP	Deposited Plan
DPE	NSW Department of Planning and Environment
DPI	NSW Department of Primary Industries
EEC	Endangered Ecological Community
EES	Environment, Energy and Science
ENV	Existing Native Vegetation
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
FM Act	*Fisheries Management Act 1994*
GIS	Geographic Information System

Growth Centres Biodiversity Certification Order	*Order to confer biodiversity certification on the State Environmental Planning Policy (Sydney Region Growth Centres) 2006*
KTPs	Key threatening processes
LEP	Local Environmental Plan
LGA	Local Government Area
NES	National Environmental Significance
NRAR	Natural Resource Access Regulator
NSW	New South Wales
NSW Government	State Government for NSW
PCT	Plant Community Type
RBM	Relevant Biodiversity Measure
SEPP	State Environmental Planning Policy
SIC	Significant Impact Criteria
SIS	Species Impact Statement
Study area	The Master Plan Site (i.e., Lot 3101 DP 1282964)
TEC	Threatened Ecological Community
ToS	Test of Significance
TPZ	Tree Protection Zone
VRZ	Vegetated Riparian Zone
WM Act	*Water Management Act 2000*
Western Parkland City SEPP	*State Environmental Planning Policy (Precincts – Western Parkland City) 2021*
WPCA	Western Parkland City Authority
WSA SEPP	*State Environment Planning Policy (Western Sydney Aerotropolis) 2020*

1 Introduction

1.1 Purpose of this report

This report accompanies the Master Plan Application for the Bradfield City Centre submitted to the Department of Planning and Environment (DPE).

Consultation was undertaken with a range of State Authorities, service providers and members of the community during the preparation of the Master Plan Application.

Consultation with authorities has not been undertaken for biodiversity matters at this stage of the Master Planning process however it has been recommended with the fisheries division of DPI and NRAR if there are future impacts to Moore Gully, key fish habitat and riparian corridors.

All matters were considered to have been adequately addressed within the Master Plan Application or in the accompanying appendices.

1.2 The Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,200-hectare region set to become Sydney's third city (the Western Parkland City), and the gateway and economic powerhouse of Western Sydney.

The Aerotropolis comprises of the new Western Sydney (Nancy-Bird Walton) International Airport surrounded by five initial precincts which include the Aerotropolis Core, Wianamatta– South Creek, Northern Gateway, Agri-business and Badgerys Creek outlined in Figure 2 below.

The final Aerotropolis planning package, including the Precinct Plan and State Environmental Planning Policy (SEPP) Amendment, was gazetted by DPE in March 2022 and the Development Control Plan Phase 2 was finalised in November 2022. These documents have been used to inform the preparation of the Bradfield City Centre Master Plan.

The proposed Master Plan Application for the site has also been prepared using the Western Sydney Aerotropolis Master Plan Guideline and Master Plan Requirements.

2 Bradfield City Centre

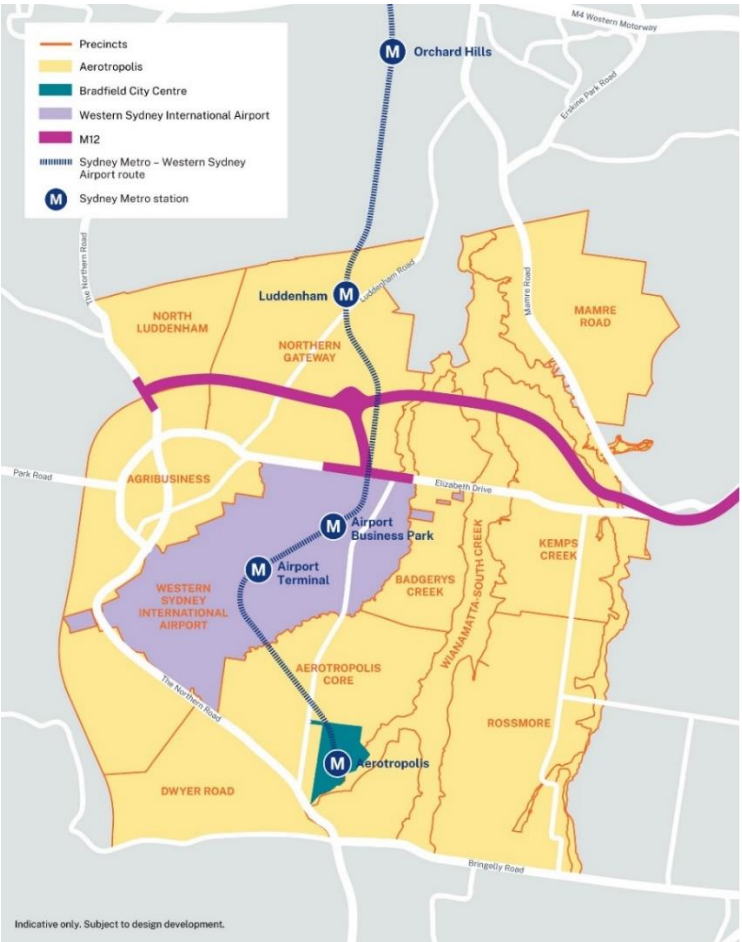
2.1 Strategic Context

The Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and The Northern Road (see **Figure 1** below).

The Sydney Metro Western Sydney Airport line runs through the site, providing connections from the key centre of St Marys through to stations at Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis which is located within the site.

The site is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and The Northern Road.

Figure 1 Strategic Context



Set on natural waterways, Bradfield City Centre presents a rare opportunity to showcase the best urban design and to create a thriving, blue and green, connected City in which Australians will want to live, learn and work. The Bradfield City Centre will be a beautiful and sustainable 22nd Century City. It will foster the

innovation, industry and technology needed to sustain the broader Aerotropolis and fast track economic prosperity across the Western Parkland City.

2.2 The Master Plan Site

The street address for Bradfield City Centre is 215 Badgerys Creek Road, Bradfield (the Site) within the Liverpool Council Local Government Area (LGA). The site is legally described as Lot 101 DP 1282949 and has an area of 114.6 hectares, with road access to Badgerys Creek Road located at the north-western corner. The site spans across the Aerotropolis Core and Wianamatta-South Creek Precinct, within Western Sydney Aerotropolis. The Site is outlined in **Figure 2** below.

The Site is predominantly zoned Mixed Use under the Western Parkland City SEPP, with a small portion of Enterprise zoned land located on the north-western corner of the site. The site also includes Environment and Recreation zoned land mostly along Thompsons Creek.

Figure 2 Master Plan Site

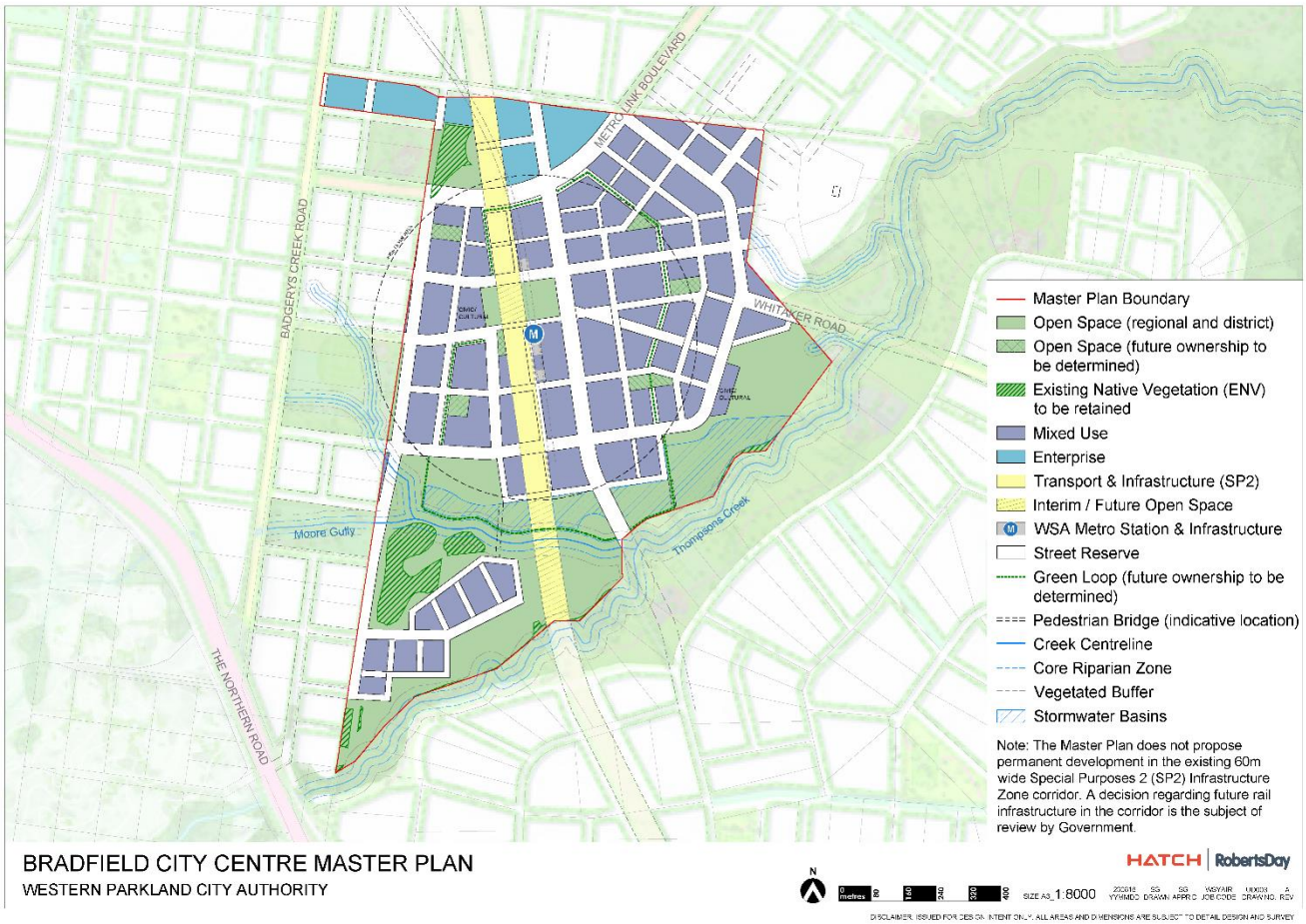
2.3 The Bradfield City Centre Master Plan

The Western Parkland City Authority has prepared a Master Plan (**Figure 3** below) in accordance with the DPE Master Plan Requirements.

The Master Plan sets out a framework for future development within the Bradfield City Centre which includes:

- Road network, key connectors to adjoining land and the regional road network (existing and future)
- Block structure
- Indicative open space network
- Sustainability strategy
- Social and infrastructure strategy
- Arts and culture strategy
- Infrastructure servicing strategy

Figure 3 Master Plan



2.4 The Proposal

The Bradfield City Centre Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons for technical assessments (**Table 1**).

Table 1 Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500 sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000 sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm +

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

3 Baseline investigations

3.1 Technical baseline site consideration

Biosis Pty Ltd previously prepared the *Western Sydney Aerotropolis Core Precinct Stage 1 Existing conditions – Biodiversity* report (Biosis 2020) on behalf of the Western Parkland City Authority, to support the Stage 1 Bradfield City Centre Master Plan. This assessment covered Lot 3101 DP 1282964 as well as adjoining lots along the western boundary. The assessment included a desktop review to determine the ecological values likely to be present within the site, as well as a field assessment of the site to determine the existing biodiversity values.

Key ecological values

The assessment identified the following key ecological values within the site:

- Native vegetation providing habitat for native flora and fauna (biota).
- Seven TECs listed under the Commonwealth EPBC Act and/or NSW BC Act:
    - *Cooks River/Castlereagh ironbark forest in the Sydney Basin Bioregion* (CEEC EPBC Act; EEC, BC Act).
    - *Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South-East Corner bioregions* (EEC, BC Act).
    - *River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria* (CEEC, EPBC Act) and the equivalent *River-flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South-East Corner Bioregions* (EEC, BC Act).
    - *Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest* (CEEC, EPBC Act).
    - *Cumberland Plain Woodland in the Sydney Basin Bioregion* (CEEC, BC Act).
    - *Sydney Freshwater Wetlands in the Sydney Basin Bioregion* (EEC, BC Act).
    - *Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South-East Queensland* (EEC, EPBC Act) and the equivalent *Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South-East Corner Bioregions* (EEC, EPBC Act and BC Act).
- Habitat trees providing roosting and breeding habitat for native hollow-dependent fauna.
- One threatened flora species, *Marsdenia viridiflora* subsp. *viridiflora* (Endangered population, BC Act).
- Creeks, wetlands and dams providing habitat for native biota:
    - Thompsons Creek, a Strahler order five watercourse and associated riparian corridor, including Key Fish Habitat, within Commonwealth land and adjacent lots.
    - Moore Gully Creek, a Strahler order four watercourse, including Key Fish Habitat, within Commonwealth land and adjacent lots.
    - Two wetlands, one located at the western end of Moore Gully within the study area, and the other located along the south-eastern boundary of the study area.
    - Farm dams.

Biodiversity certification order

In addition to the key ecological values, the *Western Sydney Aerotropolis Core Precinct Stage 1 Existing conditions – Biodiversity* report (**Biosis 2020**) also outlined the site's occurrence within the south west growth centre as defined under Chapter 3 (Sydney region growth centres) of the Western Parkland City SEPP. The site includes areas mapped as both certified and non-certified land and is subject to the *Order to confer biodiversity certification on the State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (Growth Centres Biodiversity Certification Order). The certified and non-certified areas that occur within the study area are shown in **Figure 4**.

3.2 Area of Focus

The area of focus of the current assessment is the Bradfield City Centre Master Plan Site as outlined in Section 2.2 (i.e. Lot 3101 DP 1282964) and shown in **Figure 2**, which is hereafter referred to as the study area.

The objective of this assessment is to:

- Summarise the ecological values of the site and study area.
- Map the native vegetation of the study area and clearly identify any vegetation to be removed.
- Provide a flora and fauna species inventory (based on data gathered during previous assessment).
- Consider the potential for threatened species to occur, including potential habitat areas.
- Assess the Master Plan against the relevant Commonwealth and State biodiversity legislation.
- Assess the Master Plan's compliance with the framework established under the *Western Sydney Aerotropolis Wildlife Management Assessment* (**Avisure 2020**) report.
- Assess the consistency of the Master Plan with the Growth Centres Biodiversity Certification Order.
- Assess the impacts of the Master Plan on the ecological values of the riparian corridors within the study area.
- Assess the requirements for a BDAR.
- Provide recommendations and potential mitigation measure to reduce adverse ecological impacts.

4 Assessment Requirements and Policy Context

This section provides an overview of key biodiversity legislation and government policy considered in this assessment. This section does not describe the legislation and policy in details and guidance provided here does not constitute legal advice.

4.1 Master Plan Requirements

The DPE have issued Master Plan Requirements (MPRs) to the Authority for the preparation of a Master Plan for Bradfield City Centre. This report has been prepared to address the MPRs outlined in **Table 2**.

Table 2 Master Plan Requirements

Reference	Master Plan Requirement	Where addressed
16	Demonstrate that the amount of existing native vegetation (ENV) protected under the draft master plan is the same as that which is currently protected under the WPC SEPP and Precinct Plan on the land to which the draft master plan applies.	Section 6.7.3 Table 9 (Item 13)
16	Identify any direct and indirect biodiversity impacts associated with the project in accordance with the *Biodiversity Conservation Act 2016* and the Biodiversity Assessment Method 2020, including the preparation of a Biodiversity Development Assessment Report (BDAR) unless a waiver is granted, or the site is on biodiversity certified land.	Section 6.7.4
16	Describe the proposed regime for avoiding and minimising, managing and reporting any biodiversity impacts of future development.	Section 6.7.4 Section 7 Table 17
16	Demonstrate consistency with the Relevant Biodiversity Measures (RBM) of the Growth Centres Biodiversity Certification Order (the Order) and the Commitments for matters of national environmental significance of the Strategic	Section 6.7.3 Table 9

Reference	Master Plan Requirement	Where addressed
	Assessment, including the application of RBM 19 of the Order.	
16	Quantify the amount of ENV which will be protected in non-certified lands.	Section 6.7.3 Table 9 (Item 13)
16	Demonstrate how the ENV will be protected in the draft master plan area.	Section 6.7.3 Table 9 (Items 6 and 13)
16	Be supported by a report and maps (including shapefiles).	Biodiversity Strategy and Impact Assessment (this report) Figure 4, Figure 5, Figure 6, and Figure 7

4.2 Commonwealth Government Plans and Policies

4.2.1 *Environment Protection and Biodiversity Conservation Act 1999*

The EPBC Act is the Australian Government's key piece of environmental legislation. The EPBC Act applies to developments and associated activities that have the potential to significantly impact on Matters of National Environmental Significance (NES) protected under the Act.

Nine (9) Matters of NES are identified under the EPBC Act:

- World heritage properties.
- National heritage places.
- Wetlands of international importance (also known as 'Ramsar' wetlands).
- Nationally threatened species and ecological communities.
- Migratory species.
- Commonwealth marine areas.
- The Great Barrier Reef Marine Park.
- Nuclear actions (including uranium mining).
- A water resource, in relation to coal seam gas development and large coal mining development.

Under the EPBC Act, activities that have potential to result in significant impacts on Matters of NES must be referred to the Commonwealth Minister for Environment for assessment.

Matters of NES relevant to the current project include nationally threatened species and ecological

communities, and migratory species. Threatened species and ecological communities protected by the EPBC Act are outlined in Sections 6.2 and 6.3, and summarised in Section 6.5.

Usually impacts to EPBC Act listed threatened species and ecological communities require assessment in the form of a significant impact criteria (SIC) assessment, with significant impacts potentially requiring a referral to the Commonwealth Minister for the Environment. However, the study area includes land that has been previously certified for development under section 146B of the EPBC Act and as such these SIC assessment are not required. Further details of this certification as it relates to the study area and assessment under the EPBC Act are provided in Section 6.7.1.

4.3 State Government Plans and Policies

4.3.1 *Environmental Planning and Assessment Act 1979*

The EP&A Act was enacted to encourage the proper consideration and management of impacts of proposed development or land-use changes on the environment (both natural and built) and the community. The EP&A Act is administered by the New South Wales (NSW) DPE.

The EP&A Act provides the overarching structure for planning in NSW and is supported by other statutory environmental planning instruments. Sections of the EP&A Act of primary relevance to the natural environment are outlined further below.

Test of significance

Section 1.7 of the EP&A Act requires proponents and consent authorities to consider if a development will have a significant effect on threatened species, populations or communities listed under the BC Act and *Fisheries Management Act 1994* (FM Act).

Section 1.7 (Section 7.3 of the BC Act and Part 7A of the FM Act) outlines factors that must be taken into account in a Test of Significance (ToS). Where any ToS determines that a development will result in a significant effect to a threatened species, population or community a SIS or preparation of a BOS application is required.

However, the study area is partially certified, including lands that have been previously certified for development under the Growth Centres Biodiversity Certification Order. As the impacts associated with the Master Plan are confined to the certified lands, with no impacts occurring within the non-certified areas, ToS are not required for BC Act listed species. Full discussion of the certification within the study area is provided in Section 4.3.2 below.

Further assessment against the EP&A Act is provided in **Section 6.7.2**.

4.3.2 Western Parkland City SEPP – Chapter 3 (Sydney region growth centres)

Chapter 3 of the Western Parkland City SEPP (Sydney region growth centres) establishes the broad framework for the development of four identified growth centres in Western Sydney: the North-West Growth Centre, the South-West Growth Centre, the Wilton Growth Area, and the Greater Macarthur Growth Area. The aim of this policy was to allow for the co-ordinated release of land for residential, employment and other urban development within the growth centres, in order to ensure high-quality, sustainable and liveable developments. The study area occurs within the South-West Growth Centre and includes land designated as certified and non-certified under this SEPP.

Order to confer biodiversity certification on the State Environmental Planning Policy (Sydney Region Growth Centres) 2006

In December 2007 the Growth Centres Biodiversity Certification Order for the North-West Growth Centre and South-West Growth Centre was made by the NSW Minister for the Environment. This biodiversity certification was granted under Schedule 7 of the now repealed NSW *Threatened Species Conservation Act 1995* (TSC Act). This certification still has effect due to the action of Part 8 Clause 43 of the Biodiversity Conservation (Savings and Transitional) Regulation 2017. The effects of the conferred biodiversity certification are:

> *(1) Any development for which development consent is required under the provisions of a biodiversity certified EPI is, for the purposes of the Part 4 of the EP&A Act, taken to be development that is not likely to significantly affect any threatened species, population or ecological community, or its habitat.*
>
> *(2) An activity to which Part 5 of the EP&A Act applies that a biodiversity certified EPI provides can be carried out without the need for development consent is, for the purposes of that Part, taken to be an activity that is not likely to significantly affect any threatened species, population or ecological community, or its habitat.*

Maps were included as under Schedule 2 biodiversity certification order that showed areas of land that were considered as "certified areas" and "non-certified areas". Land mapped within a certified area does not require any further biodiversity assessment as part of the development application (DA) process. Land mapped within a 'non-certified area' may still require a biodiversity assessment prior to development. The certified and non-certified areas that occur within the study area are shown in **Figure 4**.

Relevant Biodiversity Measures

The biodiversity certification conferred upon the Growth Centres SEPP (now included as Chapter 3 of the Western Parkland City SEPP) is subject to conditions known as Relevant Biodiversity Measures (RBMs), if not complied with these conditions allow the Minister to suspend or revoke the certification. A total of 41 RBMs applying to the certification were included under Schedule 1 of the Growth Centres Biodiversity Certification Order. RBMs 6-13 are related to the conservation of 'existing native vegetation' (ENV) within the growth areas. Specifically a minimum of 2,000 hectares of ENV must be retained or protected within the Growth Centres, either within the certified areas and/or the non-certified areas (DPIE 2019).

ENV is defined under Schedule 1 of the Growth Centres Biodiversity Certification Order as follows:

Existing native vegetation means areas of indigenous trees (including any sampling) that:

- *had 10 % or greater over-storey canopy cover present,*
- *were equal to or greater than 0.5 ha in area, and*
- *were identified as "vegetation" on maps 4 and 5 of the draft Growth Centres Conservation Plan.*

Additional development controls for the removal of vegetation, including ENV, are detailed under Part 6 of the Growth Centres SEPP.

Further details of the biodiversity certification related to Chapter 3 (Sydney region growth centres) of the Western Parkland City SEPP, and an assessment against the RBMs as they relate to the study area are outlined include in Section 6.7.3. ENV originally mapped within the study area as part of the *Draft Growth Centres Conservation* Plan (Growth Centres Commission 2007) is shown in **Figure 4**.

4.3.3 *Biodiversity Conservation Act 2016*

The BC Act is the key piece of legislation providing for the protection and conservation of biodiversity in NSW through the listing of threatened species and communities and key threatening processes (KTPs). Impacts to

threatened species and communities are assessed under Section 7.3 of the BC Act.

Further, the BOS will be triggered if the biodiversity assessment under the EP&A Act and BC Act determines a project is either:

- Likely to result in a significant effect to any threatened species, or
- The clearance of native vegetation exceeds the minimum lot size, or
- The project will impact on an area(s) mapped under the Biodiversity Values Map.

Should the BOS be triggered, then either a SIS or BDAR should be prepared.

Threatened species and communities listed under the BC Act are discussed in **Section 6.5** and an assessment against the BC Act is included in **Section 6.7.4**.

4.3.4 *Fisheries Management Act 1994*

The FM Act provides for the protection and conservation of aquatic species and their habitat throughout NSW. Impacts to threatened species, populations and communities, and critical habitats listed under the FM Act must be assessed through the ToS process under Section 1.7 of the EP&A Act (see above). If assessment under Section 1.7 of the EP&A Act determines a project is likely to result in a significant effect to threatened species, populations or communities then a SIS should be prepared.

Threatened species, populations and communities listed under the FM Act are discussed in Section 6.4 and summarised in Section 6.5. An assessment of whether the project will result in a significant effect to these threatened species, populations and communities is summarised in Section 6.5.

Two key objectives of the FM Act are to; conserve fish stocks and key fish habitats, and conserve threatened species, populations and ecological communities of fish and marine vegetation. When reviewing applications, the DPI will assess the likelihoods of impacts to waterways in relation to their sensitivity (TYPE) and waterway class (CLASS).

An assessment of the waterways is provided in **Section 6.4**. An assessment of the project against the objectives of the FM Act is provided in **Section 6.7.5**.

4.3.5 *Water Management Act 2000*

The *Water Management Act 2000* (WM Act) provides for the sustainable and integrated management of the State's water for the benefit of both present and future generations based on the concept of ecologically sustainable development. Under the WM Act an approval is required to undertake controlled activities on waterfront land, unless that activity is otherwise exempt under Section 91E. Waterfront land is defined within the Act as the bed of any river, lake or estuary and any land within 40 metres of the riverbanks, lake shore or estuary mean high water mark.

A public authority does not need to obtain a controlled activity approval for any controlled activities that it carries out in, on or under waterfront land.

The WM Act is supported by a series of interpretation guidelines including *Controlled activities on waterfront land - guidelines for riparian corridors on waterfront land* (NSW Office of Water 2012). This guideline defines a riparian management envelope referred to as the vegetated riparian zone (VRZ). The width of the VRZ within a riparian corridor has been pre-determined and standardised for first, second, third and fourth order and greater watercourses according to the Strahler System of ordering watercourses and is measured from the top of the highest bank on both sides of the watercourse. This guideline also presents the riparian corridor matrix that assists applicants for controlled activity approvals to identify certain works and activities that can

occur on waterfront land and in riparian corridors. The guideline also includes overarching management measures for works on waterfront land.

An assessment of whether a Controlled Activity Approval from the NSW DPI is required under the WM Act is provided in **Section 6.7.6**.

4.3.6 *Biosecurity Act 2015*

The *Biosecurity Act 2015* (Biosecurity Act) outlines biosecurity risks and impacts, which in relation to the current assessment includes those risks and impacts associated with weeds. A biosecurity risk is defined as the risk of a biosecurity impact occurring, which for weeds includes the introduction, presence, spread or increase of a pest into or within the State or any part of the State. A pest plant that has the potential to out-compete other organisms for resources, including food, water, nutrients, habitat and sunlight and / or harm or reduce biodiversity.

Under the Biosecurity Act a priority weed is any weed identified in a local strategic plan, for a region that includes that land or area, as a weed that is or should be prevented, managed, controlled or eradicated in the region. A local strategic plan here refers to a local strategic plan approved by the Minister under Division 2 of Part 4 of the *Local Land Services Act 2013*.

The Biosecurity Act also introduces the General Biosecurity Duty, which states:

> *All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.*

Priority weeds are discussed further in **Section 6.7.7**.

4.3.7 Cumberland Plain Conservation Plan

The *Cumberland Plain Conservation Plan* (CPCP) will support biodiversity and growth in the Western Parkland City through the protection of the region's most important conservation values. This will be achieved through the creation of new reserves, conservation areas and green spaces for the local community. The CPCP has been designed to improve ecological resilience and function, and to offset biodiversity impacts from new housing, employment areas and infrastructure in the Western Parkland City (State of NSW 2020).

The CPCP has been developed to allow for strategic biodiversity certification of four growth areas under the BC Act as well as strategic assessment under the EPBC Act. The four growth areas are:

- Greater Macarthur Growth Area
- Greater Penrith to Eastern Creek Investigation Area
- Western Sydney Aerotropolis
- Wilton Growth Area

The CPCP excludes areas of the Western Sydney Aerotropolis that overlap with the South West Growth Centre, the Western Sydney International Airport and the eastern part of Mamre Road Precinct (State of NSW 2021). As the Bradfield City Centre occurs within the South West Growth Centre, the CPCP does not apply to the site. As such the CPCP will not be discussed further as part of this assessment.

4.4 Western Sydney Aerotropolis

4.4.1 *Western Parkland City SEPP – Chapter 4 (Western Sydney Aerotropolis)*

The study area is located within land on the Land Application Map of Chapter 4 (Western Sydney Aerotropolis) of the Western Parkland City SEPP and is therefore subject to the development controls and permitted developments detailed under the SEPP. The following sections directly relate to biodiversity:

- 4.19 Wildlife hazards.
- 4.25 Preservation of trees and vegetation in Environment and Recreation Zone and Cumberland Plain.

An assessment of the Master Plan against these clauses is included in **Section 6.7.8**.

4.4.2 *Western Sydney Aerotropolis Development Control Plan 2022 Phase 2*

The *Western Sydney Aerotropolis Development Control Plan 2022 Phase 2* (Phase 2 DCP) provides development controls to supplement the WSAP, Western Parkland City SEPP, *Western Sydney Aerotropolis Precinct Plan* and the Phase 1 DCP. Its aim is to inform the preparation and assessment of master plans and DAs.

Section 2.4 (Vegetation and Biodiversity) of the Phase 2 DCP applies to native vegetation and biodiversity and is comprised of the following sections:

- 2.4.1 Deep Soil and Tree Canopy
- 2.4.2 Protection of Biodiversity
- 2.4.3 Protection of Trees and Vegetation
- 2.4.4 On Lot and Streetscape Landscaping and Preferred Plant Species

An assessment of the performance outcomes and benchmark solutions included in these sections as they relate to the Master Plan is included in **Section 6.7.9**.

Section 2.10.3 (Wildlife Hazards) of the Phase 2 DCP is also relevant to native vegetation and biodiversity, however this has been addressed separately under **Section 4.4.3**.

4.4.3 *Wildlife Management Assessment Report*

The *Western Sydney Aerotropolis Wildlife Management Assessment Report* (Avisure 2020) (WSA Wildlife Management Assessment Report) identifies wildlife attraction issues associated with land use planning for the Western Sydney Aerotropolis and the Western Parkland City. The report describes the legal framework and summarises a variety of support and guidance documentation to minimise the potential for wildlife strikes at the Western Sydney Airport. It includes the Aerotropolis Aviation Wildlife Safeguarding Framework (AAWSF) which outlines the wildlife attraction risk or particular land uses and outlines actions for existing or proposed developments based on proximity to the airport (with 3 km, 8 km and 13 km radius buffers included as part of the framework).

The WSA Wildlife Management Assessment Report has been incorporated into section 2.10.3 (Wildlife Hazards) of the Phase 2 DCP. An assessment of the Master Plan against this framework is included in **Section 6.7.10**.

4.4.4 Western Sydney Aerotropolis Plan

The *Western Sydney Aerotropolis Plan* (Western Sydney Planning Partnership 2020) (WSAP) sets out the planning framework for the Western Sydney Aerotropolis. The plan establishes the vision for the Aerotropolis, as well as a set of guiding objectives and principles. It also identifies the intended land use planning outcomes for each of the 10 identified precincts that make up the Aerotropolis.

An assessment of the planning principles that relate to biodiversity, as included in the Appendix of the WSAP, is included in Section 6.7.11.

4.4.5 Western Sydney Aerotropolis Precinct Plan

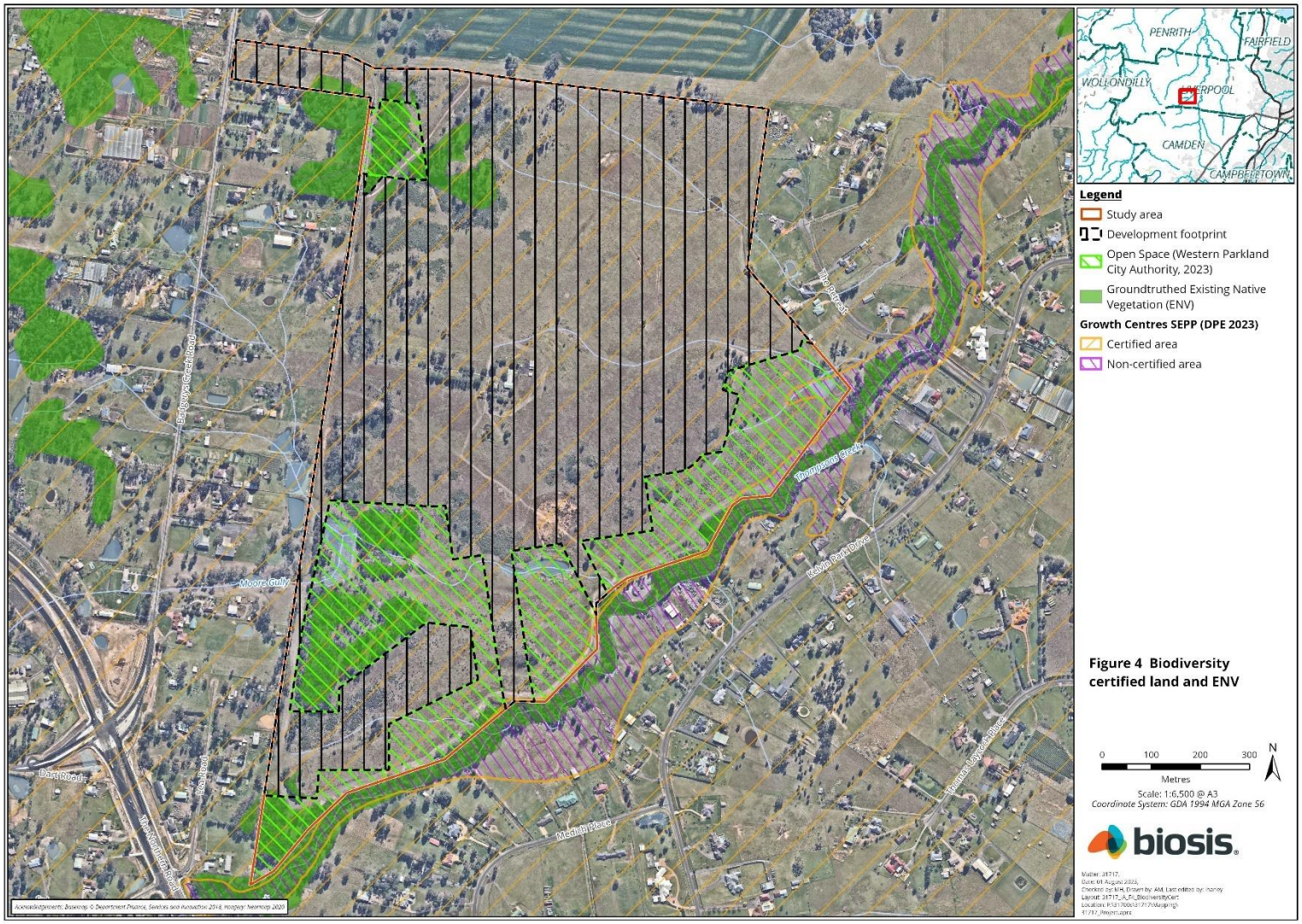
The *Western Sydney Aerotropolis Precinct Plan* (DPE 2023) has been prepared to support the Western Parkland City SEPP. The Precinct Plan provides place-based objectives and requirements to guide the development of the Aerotropolis in a consistent and sustainable manner over time. The plan sets out the fine-scale details to support land use zoning across the aerotropolis.

A brief statement regarding the precinct plan and the master plan adherence to this plan is included in Section 6.7.12.

4.5 Other relevant technical standards

No other relevant technical standards are applicable for biodiversity.

Figure 4 Biodiversity certified land and ENV



5 Framework for technical assessment

5.1 Literature and database review

To provide a context for the study area, information about flora and fauna from within 5 kilometres (the locality) was obtained from relevant public databases. Records from the following databases were collated and reviewed in September 2020:

- Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Search Tool for matters protected by the EPBC Act (output provided in **Appendix 3**).
- NSW BioNet database for the Atlas of NSW Wildlife, Department of Planning and Environment (DPE) (BC Act).
- The NSW DPI Spatial Data Portal for FM Act listed threatened species, populations and communities.
- PlantNET (RBGDT 2021).

Other sources of biodiversity information included relevant vegetation mapping:

- *Native vegetation of southeast NSW: a revised classification and map for the coast and eastern tablelands* (SCIVI) (Tozer et al. 2010).
- *Remnant vegetation of the western Cumberland subregion, 2013 Update. VIS_ID 4207* (DPE 2015).

The following reports were also reviewed:

- *Background Report – Aerotropolis City Centre Master Planning* (RobertsDay Pty Ltd 2020).
- *The Draft Cumberland Plain Conservation Plan* (State of NSW 2021).
- *The Draft Growth Centres Conservation Plan* (Growth Centres Commission 2007)
- *Highlights of the Draft Cumberland Plain Conservation Plan* (State of NSW 2020).
- *Flora and fauna assessment: Bringelly RAAF Receiving Station* (Golder Associates 2011).
- *Sydney Metro – Western Sydney Airport – Technical paper 3: Biodiversity Development Assessment Report* (M2A 2020).
- *Greater Sydney Region Plan: A Metropolis of Three Cities* (State of NSW 2018).
- NSW Scientific Committee final determinations for TECs.

5.2 Site investigation

5.2.1 Flora assessment

The initial flora assessment was undertaken on the 8 and 9 September 2020 using a random meanders survey methodology to determine the vegetation types present.

General classification of native vegetation in NSW used in this report is based on the classification system in Keith (2004) which uses three groupings of vegetation: vegetation formation, vegetation class and vegetation type, with vegetation type the finest grouping. The grouping referred to in this report is Plant Community Type (PCT), commonly used across NSW since 2016.

The vegetation types were stratified into PCTs broadly based on previous vegetation mapping, and the vegetation boundaries marked with a hand-held GPS in the field. Appropriate PCTs were selected based on species composition and structure, known geographical distribution, landscape position, underlying geology, soil type, and any other diagnostic features.

The general condition of native vegetation was observed as well as the effects of current seasonal conditions. Notes were made on specific issues such as priority weed infestations, evidence of management works, current grazing impacts and the regeneration capacity of the vegetation.

A secondary field investigation was undertaken on the 18 May 2021 to collect vegetation integrity data through the completion of vegetation plots undertaken in accordance with the *Biodiversity Assessment Method* (BAM) (DPIE 2020). These plots were undertaken in targeted areas to collect data within the previously mapped ENV on site, as mapped under the Draft Growth Centres Conservation Plan (Growth Centres Commission 2007). Each vegetation plot included the following:

- One 400 square metre plot (standard 20 m × 20 m), to assess composition and structure attributes.
- One 1,000 square metre plot (standard 20 m × 50 m), to assess the function attributes (number of large trees, stem size classes, tree regeneration and length of logs).
- Five 1 square metre subplots, to assess average litter cover (and other optional ground cover components) for the plot.

A total of six plots were undertaken within the study area.

A list of flora species was compiled from each survey period. Records of threatened flora species will be submitted to EES for incorporation into the BioNet Wildlife Atlas.

5.2.2 Fauna assessment

The study area was investigated on 8 and 9 September 2020 to determine its values for fauna. These were determined primarily on the basis of the types and qualities of habitat features present. All species of fauna observed during the assessment were noted and active searching for fauna was undertaken. This included direct observation, searching under rocks and logs, examination of tracks and scats and identifying calls. Particular attention was given to searching for threatened biota and their habitats. Significant trees providing potential habitat for fauna (i.e., hollow-bearing trees) were also recorded. Fauna species were recorded with a view to characterising the values of the site and the investigation was not intended to provide a comprehensive survey of all fauna that has potential to utilise the site over time.

Fauna records will be submitted to EES for incorporation into the NSW BioNet Wildlife Atlas.

5.2.3 Aquatic assessment

An aquatic assessment was undertaken of Moore Gully on 18 May 2021. The key aim of the assessment was to describe and characterise the condition of Moore Gully within the study area. During this assessment the length of Moore Gully within the study area was traversed. Visual assessments of the waterway were made, taking note of the flow status, geomorphic characteristics, presence and condition of aquatic vegetation and in-stream habitats for aquatic biota. The field assessment included the following:

- Collection of physiochemical water quality variables using a Horiba Multiparameter Water Quality Meter. Variable measured included pH, dissolved oxygen, temperature, turbidity and electrical conductivity.
- Sampling of aquatic macroinvertebrates and subsequent NSW AUSRIVAS rapid assessment (Turak, Johnstone, & Waddell 2004).
- Survey for native fish in suitable habitats with a total of 11 bait traps deployed over a period of 4 hours.

5.2.4 Permits and licences

The flora and fauna assessments were conducted under the terms of Biosis' Scientific Licence issued by the Environment, Energy and Science Group under the *National Parks and Wildlife Act 1974* (SL100758, expiry date 31 May 2022). Fauna survey was conducted under approval CSB 17/892 from the NSW Animal Care and Ethics Committee (expiry date 31 January 2023). Aquatic survey was undertaken under DPI Fisheries Permit (P05/0016-6.0, expiry date 3 July 2023).

5.2.5 Limitations

Ecological surveys provide a sampling of flora and fauna at a given time and season. There are several reasons why not all species will be detected at a site during survey, such as species dormancy, seasonal conditions, ephemeral status of waterbodies, and migration and breeding behaviours of some fauna. In many cases these factors do not present a significant limitation to assessing the overall ecological values of a site.

The current biodiversity assessment was conducted in spring, which is an optimal time for survey. The survey effort is considered sufficient to assess the general values of the study area.

Database searches, and associated conclusions on the likelihood of species to occur within the study area, are reliant upon external data sources and information managed by third parties.

5.2.6 Mapping

Aerial photography supplied by Near Maps (NearMap Australia Pty Ltd 2023).

Mapping was conducted using hand-held (uncorrected) Tablet Personal Computer units (GDA94) and aerial photo interpretation. The accuracy of this mapping is therefore subject to the accuracy of the GPS units (generally ± 7 metres) and dependent on the limitations of aerial photo rectification and registration.

Mapping has been produced using a Geographic Information System (GIS). Electronic GIS files containing the relevant flora and fauna spatial data are available to incorporate into design concept plans. However, this mapping may not be sufficiently precise for detailed design purposes.

6 Technical assessment

6.1 Landscape context

The study area occurs within the Sydney Basin IBRA bioregion and the Cumberland Plain IBRA subregion. The Sydney Basin bioregion lies on the central east coast of NSW and is one of the most species diverse in Australia. This is a result of the variety of rock types, topography and climates that are located within the bioregion (OEH 2016).

The study area consists of a gently undulating landscape that has been semi-cleared of native vegetation. The area was the previous site of the Bringelly RAAF Telecommunications Unit and includes several disused buildings associated with the previous occupancy. The surrounding lots support a mixture of residential and agricultural uses. There are pockets of vegetation remaining on-site, scattered across the predominantly open field and along the Strahler Order five watercourse, Thompsons Creek, which runs along the eastern edge of the site. There are also two wetlands and four farm dams onsite that are also support native vegetation.

The dominant soil type present is Ashfield Shale and Bringelly Shale of the Wianamatta Group, as described in the Blacktown Soil Landscape (Bannerman & Hazelton 1990). Soils are characteristically shallow to moderately deep, hard setting mottled podzolic soils. The site is also associated with South Creek soil landscapes and drainage depressions in conjunction with the alluvial deposits of Thompsons Creek.

The study area is directly linked to a small patch of bushland in the south however The Northern Road represents a significant barrier to further movement of terrestrial fauna. The riparian corridor associated with Thompsons Creek extends northwards, connecting directly to South Creek. Both the riparian corridor and the watercourse itself provide high connectivity within the landscape for both terrestrial and aquatic biota.

6.2 Flora and fauna

Species recorded during the flora assessment are listed in Table A.1 of Appendix 1 (flora). Unless of particular note, these species are not discussed further. A list of threatened entities recorded or predicted to occur in the local area is also provided in those appendices (**Table A.2**), along with an assessment of the likelihood of the species occurring within the study area.

One threatened flora species, *Marsdenia viridiflora* subsp. *viridiflora*, listed as an endangered population under the BC Act, was observed during the field assessment. Four individuals were observed in a cluster along a fence line, located immediately adjacent to the north-west boundary of the study area (**Figure 5**). Individuals do not occur within the study area.

During the site investigation nine priority weeds as defined by DPI for the Liverpool LGA were recorded. These priority weeds include: Ground Asparagus *Asparagus aethiopicus*, Bridal Creeper *Asparagus asparagoides*, Water Hyacinth *Eichhornia crassipes*, Lantana *Lantana camara*, African Boxthorn *Lycium ferocissimum*, African Olive *Olea europaea* subsp. *cuspidata*, Prickly Pears *Opuntia* sp., Blackberry *Rubus fruticosus* species aggregate (sp. agg.) and Fireweed *Senecio madagascariensis*.

Species recorded during the fauna assessment are listed in Table A.3 of Appendix 2 (fauna). Unless of particular note, these species are not discussed further. A list of threatened entities recorded or predicted to occur in the local area is also provided in those appendices (Table A.4), along with an assessment of the

likelihood of the species occurring within the project area.

A list of migratory species listed under the EPBC Act that have potential to occur within the study area is also included in **Table A.5**.

6.3 Vegetation communities

The vegetation throughout the majority of the study area has been modified by past disturbances, which have principally included land clearing for the previous Bringelly RAAF Telecommunications Unit.

The study area supports a range of ecological values including 37.15 hectares of native vegetation consistent with six (6) different PCTs, scattered trees, waterways, dams, and wetlands. The vegetation communities present within the study area are:

- PCT 725 Broad-leaved Ironbark – Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion.
- PCT 781 Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion.
- PCT 835 Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion.
- PCT 849 Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion.
- PCT 1071 Phragmites australis and Typha orientalis coastal freshwater wetlands of the Sydney Basin Bioregion.
- PCT 1800 Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter Valley.

These vegetation communities, and their associated ecological values, are discussed in greater detail in the tables below. They are also mapped in **Figure 5**.

Table 3 Vegetation communities of the study area

PCT 725 Broad-leaved Ironbark – Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion	
Extent within the study area	1.00 ha
Description	PCT 725 had been historically disturbed through land clearing resulting in weed invasion and a reduction in native floristic diversity. Canopy species recorded consisted primarily of Red Ironbark *Eucalyptus fibrosa* with occasional representations of Forest Red Gum *Eucalyptus tereticornis* and Narrow-leaved Ironbark *Eucalyptus crebra* in ecotonal areas. The native mid-storey was found to be floristically poor but dominated by large stands of *Melaleuca decora* supported by occasional specimens of Blackthorn *Bursaria spinosa* subsp. *spinosa* and Prickly-leaved Paperbark *Melaleuca nodosa.* Exotic species encountered within the mid-storey included stands of Broad-leaf Privet *Ligustrum lucidum*, Lantana, Cassia *Senna pendula* var. *glabrata* and African Olive.

PCT 725 Broad-leaved Ironbark – Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion	
	The ground stratum was highly disturbed with only limited number of residual native grasses and forbs being encountered with native flora species such as Weeping Grass *Microlaena stipoides* var. *stipoides* and Fishweed *Einadia trigonos* being most common. Dominant exotic flora within the stratum included Wandering Jew *Tradescantia fluminensis,* Cobblers Pegs *Bidens pilosa,* Kikuyu Grass *Cenchrus clandestinus* and Paddy's Lucerne *Sida rhombifolia.*
Condition	The community was present in moderate condition as a result of the highly disturbed nature of the mid and ground storey stratums.
Associated soils, rainfall and landscape position	The community occurs on clay-rich soils derived from predominantly Tertiary alluvium and on Wianamatta Shale derived soils found next to Tertiary alluvium (NSW NPWS 2002, Tozer 2003, NSW Scientific Committee 2011a).
TEC	Commonwealth EPBC Act: *Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion* (CEEC). NSW BC Act: *Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion* (EEC). Justification: Species and assemblage are consistent with both the *Cooks River/Castlereagh ironbark forest in the Sydney Basin Bioregion - endangered ecological community listing final determination* (NSW Scientific Committee 2011a) and the *Approved Conservation Advice (including listing advice) for Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion* (Department of the Environment 2015).
Threatened species habitat	The Broad-leaved Ironbark - Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion within the study area supported the several *Marsdenia viridiflora* subsp. *viridiflora* individuals, listed as an Endangered population under the BC Act. Locations of the recorded threatened flora species are provided in Figure 5.

PCT 725 Broad-leaved Ironbark – Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion	
Picture	**Photo 1 PCT 725 within the study area**

PCT 781 Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion	
Extent within the study area	0.52 ha
Description	PCT 781 was observed to be disturbed as a result of historical clearing, stock access and aquatic weed invasion. Whilst no canopy or mid storey stratums were evident, native aquatic vegetation was observed to quite diverse. Native species recorded within the PCT included Water Plantain *Alisma plantago-aquatica*, Water Primrose *Ludwigia peploides* subsp. *montevidensis*, Nardoo *Marsilea mutica*, Woolly Frogmouth *Philydrum lanuginosum*, Water Ribbons *Cycnogeton procerum*, *Potamogeton tricarinatus* and Water Couch *Paspalum distichum*. Exotic species recorded with the vegetation type included Spiny Rush *Juncus acutus* and Water Hyacinth.
Condition	The community was present in mixed condition types with 0.01 ha in high condition, 0.45 ha in moderate, and 0.06 ha in low condition. The patches observed in a low condition were as a result of their highly disturbed nature and reduced floristic diversity.
Associated soils, rainfall and landscape position	The community occurs on silts, muds or humic loams in depressions, flats, drainage lines, backswamps, lagoons and lakes associated within coastal floodplains. Generally occur below 20 m elevation in the NSW North Coast, Sydney Basin and South East Corner bioregions (NSW Scientific Committee 2004a).

PCT 781 Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion	
TEC	**Commonwealth EPBC Act:** No associated listings. **NSW BC Act:** *Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions* (EEC). **Justification:** Species and assemblage are consistent with the *Freshwater wetlands on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions - endangered ecological community listing final determination* (NSW Scientific Committee 2004a).
Picture	 **Photo 2 PCT 781 within the study area**

PCT 835 Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion	
Extent within the study area	1.73 ha
Description	PCT 835 was represented by a co-dominant canopy of Red Forest Red Gum and Cabbage Gum *Eucalyptus amplifolia* subsp. *amplifolia*, supported by regular representations of Rough-barked Apple *Angophora floribunda* and Swamp Oak *Casuarina glauca*. The native mid-storey, whilst limited, was represented by stands of Blackthorn and Coffee Bush *Breynia oblongifolia*. Exotic species encountered within the stratum were primarily represented by African Olive. This species was observed to form monocultures within sections of the stratum. The ground stratum was recorded to be relatively diverse despite the well represented exotic overstorey. Native grasses and forbs encountered within the stratum included Weeping Grass, Fishweed, Kidney Weed *Dichondra repens*, Hedgehog Grass *Echinopogon caespitosus* var. *caespitosus* and Stout Bamboo Grass

PCT 835 Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion	
	Austrostipa ramosissima. Dominant exotic flora within the stratum included Wandering Jew, Cobblers Pegs, Kikuyu Grass and Jerusalem Cherry *Solanum pseudocapsicum*.
Condition	The community was in high condition as a result of the high native floristic diversity recorded within all stratums despite the moderate representation of woody weeds.
Associated soils, rainfall and landscape position	Situated on broad alluvial flats of the Hawkesbury and Nepean river systems and forms narrow ribbons alongside streams and creeks that drain the Cumberland Plain (NSW Scientific Committee 2011b).
TEC	Commonwealth EPBC Act: *River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria* (CEEC) NSW BC Act: *River-flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions* (EEC). Justification: Species and assemblage are consistent with the Commonwealth *Conservation Advice for the River-flat eucalypt forest on coastal floodplains of New South Wales and eastern Victoria* (DAWE 2020) and the NSW *River-flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions - Scientific Committee determination* (NSW Scientific Committee 2011b).
Picture	 **Photo 3 PCT 835 within the study area**

PCT 849 Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion	
Extent within the study area	33.32 ha
Description	PCT 849 occurred as three distinct conditional type's high, moderate and low, all of which provided their own distinct floristic assemblages. High conditioned PCT 849, primarily located on the western and north-western portion of the study area, was observed to structurally and floristically diverse within all stratums. The canopy was well represented by a codominance of Forest Red Gum and Grey Box *Eucalyptus moluccana* supported by occasional representations of Narrow-leaved Ironbark. The mid storey stratum was observed to be a diverse mix of shrub species which included Hickory Wattle *Acacia implexa*, Blackthorn, Gorse Bitter Pea *Daviesia ulicifolia*, *Dillwynia sieberi*, Sticky Hopbush *Dodonaea viscosa* subsp. *cuneata* and Australian Indigo *Indigofera australis*. The ground layer stratum was observed to be floristically diverse with a wide range of grasses and forbs recorded. Native species within the stratum included Weeping Grass, Threeawn Speargrass *Aristida vagans*, Kangaroo Grass *Themeda triandra*, Winter Apple *Eremophila debilis* and Whiteroot *Lobelia purpurascens*. Exotic flora within the vegetation type were observed in low numbers and densities (species discussed below). This vegetation also included high quality derived native shrublands (DNS) and derived native grasslands (DNG) which were directly linked to the high-quality vegetation type. Moderately conditioned PCT 849 occurred in three distinct locations within the study area. As a result of historical clearing, the vegetation type was represented as either a native canopy with a limited native mid storey and ground layer or isolated patches of DNS or DNG with no linkages to high quality PCT 849 areas. Native species within the condition type included Forest Red Gum and Blackthorn with a well-represented ground layer dominated by Weeping and Kangaroo grasses. Weed densities within the vegetation type were observed at moderate densities. Low conditioned PCT 849 was observed as scatted locations throughout the study area (Figure 5). Native species encountered were limited to stands of Blackthorn, Gorse Bitter Pea and moderate to low densities of Kangaroo Grass. High densities of exotic flora were observed within the vegetation type which affected the cover, abundance and species richness of the conditional type. Exotic species recorded within all conditional types included African Olive, African Lovegrass *Eragrostis curvula*, Fireweed, Rhodes Grass *Chloris gayana*, Blackberry and Bridal Creeper.
Condition	The community was present in mixed condition types with 16.76 ha in high condition, 5.92 ha in moderate condition, and 10.64 ha in low condition. The patches observed in low condition were a result of their highly disturbed nature, reduced floristic diversity, and prevalence of weed species.
Associated soils, rainfall and landscape position	Shale Plains Woodland occurs on clay/loam soils derived from Wianamatta Shales on the Cumberland Plain at low altitudes (mainly below 150 m) with an average rainfall between 750 and 950 mm per annum.
TEC	**Commonwealth EPBC Act**: *Cumberland Plain Shale Woodlands and Shale-Gravel*

PCT 849 Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion	
	Transition Forest (CEEC). NSW BC Act: *Cumberland Plain Woodland in the Sydney Basin Bioregion* (CEEC). Justification: The 16.76 ha in high condition satisfies the listing criteria of both the EPBC Act and BC Act listing as it satisfied the following criteria: • Native tree species present with a minimum projected foliage cover of at least 10 %. • The size of the vegetation patch exceeds 0.5 ha. • The perennial understorey vegetative cover present is made up of at least 50 % native species. This criteria is outlined under the *Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest EPBC Act policy statement* (Commonwealth of Australia 2010). The 5.92 ha of moderate condition and 10.64 ha of low condition PCT 849 satisfies the listing criteria of the BC Act listing only. Species and assemblage are consistent with the *Cumberland Plain Woodland in the Sydney Basin Bioregion - critically endangered ecological community listing final determination* (NSW Scientific Committee 2009).
Pictures	 **Photo 4 PCT 849 (moderate condition) within the study area**

PCT 849 Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion	
	Photo 5 PCT 849 (high condition) within the study area

PCT 1071 Phragmites australis and Typha orientalis coastal freshwater wetlands of the Sydney Basin Bioregion	
Extent within the study area	0.22 ha
Description	PCT 1071 was represented by a monoculture of Broadleaf Cumbungi *Typha orientalis* with occasional specimens of Water Primrose. Exotic species within the vegetation type were limited to species such as Spiny Rush, Kikuyu Grass and Water Hyacinth.
Condition	The community was in moderate condition owing to the reduced species diversity and the low to moderate density of weed species observed.
Associated soils, rainfall and landscape position	The community can occur within man-made water bodies, drainage lines and depressions across a wide variety of environments. Includes modified former wetlands. Also occurs in its original form in a wide variety of situations associated with coastal plains, valleys, lagoons and other sites of poor drainage.
TEC	Commonwealth EPBC Act: No associated listings. NSW BC Act: *Sydney Freshwater Wetlands in the Sydney Basin Bioregion* (EEC). Justification: Species and assemblage are consistent with the *Sydney Freshwater Wetlands in the Sydney Basin Bioregion - endangered ecological community listing final determination* (NSW Scientific Committee 2000).

Picture	 **Photo 6 PCT 1071 within the study area**

PCT 1800 Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley	
Extent within the study area	0.35 ha
Description	PCT 1800 was represented by a dominant canopy of Swamp Oak with occasional specimens of Forest Red Gum throughout. As a result of the increased incidence of Swamp Oak canopy cover, a reduced native mid and ground storey stratum was recorded. As such, encountered native flora was limited to resilient species such as Blackthorn and Prickly-leaved Paperbark in the mid stratum and Weeping Grass, Whiteroot, Fishweed and Scurvy Weed *Commelina cyanea* within the ground layer. Exotic species encountered within the vegetation type included African Olive and Lantana.
Condition	The community was present in high condition owing to the high quality and intact canopy and densities of flora species.
Associated soils, rainfall and landscape position	Typically associated with grey-black clay-loams and sandy loams, where the groundwater is saline or sub-saline, on waterlogged or periodically inundated flats, drainage lines, lake margins and estuarine fringes associated with coastal floodplains (NSW Scientific Committee 2004b). The distinguishing feature is the prominent stands of Swamp Oak *Casuarina glauca* found along or near streams.
TEC	Commonwealth EPBC Act: *Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland* (EEC). NSW BC Act: *Swamp Oak Floodplain Forest of the New South Wales North Coast,*

PCT 1800 Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley	
	Sydney Basin and South East Corner Bioregions (EEC). **Justification**: Species and assemblage are consistent with the *Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions - endangered ecological community listing final determination* (NSW Scientific Committee 2004b) and the *Conservation advice (incorporating listing advice) for the Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community* (DoE 2018).
Picture	 **Photo 7 PCT 1800 within the study area**

6.4 Aquatic habitats

Aquatic habitats located within the study area include Moore Gully, a Strahler order four watercourse, as well as several unnamed tributaries of Thompsons Creek, a Strahler order five watercourse that occurs outside of the study area, along its eastern boundary. Two (2) wetlands supporting TECs are located within the study area, as well as four (4) farm dams supporting native biota. Details of these aquatic habitats are included in the following sections.

6.4.1 Moore Gully

Moore Gully is classed as a laterally unconfined, discontinuous channel, chain of ponds system in the NSW River Styles database (DPIE 2021), with a high level of confidence indicated for this assessment. The database also describes the system as being in moderate condition with a high recovery potential.

The field investigation supports this assessment with Moore Gully presenting as a moderate condition, chain of ponds system. These ponds are linked by preferential flow paths along a discontinuous channel that

supports aquatic and wetland vegetation. Vegetation is supported along the length of Moore Gully due to the presence of shallow water and soil moisture held within the channel zone even within discontinuous sections. The waterway is interrupted by two large man-made dams, likely constructed around existing ponds. While the channel form is discontinuous in sections, the concept of a bed and bank (forming a channel or channel zone) is still applicable. The bed and banks of Moore Gully falls within the low point of the landscape and contains a wetted area that is evidenced by the presence of shallow surface water, aquatic and wetland vegetation. The centreline of this wetted area aligns well with the hydroline mapping for the study area, with the hydroline representing the centreline of the channel zone (**Figure 6**).

Moore Gully is also considered to be key fish habitat under the FM Act as it satisfies conditions outlined in *Policy and guidelines for fish habitat conservation and management* (Fairfull 2013). The requirements of key fish habitat in relation to Moore Gully are outlined in **Section 6.7.5.1**. Riparian buffers required under the WM Act required for Moore Gully are outlined in **Section 6.7.6**.

6.4.2 Thompsons Creek and tributaries

Thompsons Creek occurs outside of the study area, extending along the eastern boundary. Whilst the watercourse occurs outside of the study area, the creek supports a continuous riparian corridor which partly occurs within the study area. This corridor extends northward to connect with the riparian corridor of South Creek, a Strahler order six watercourse, north of the study area.

The following watercourses within the study area are tributaries of Thompsons Creek:

- Moore Gully as detailed in **Section 6.4.1** above.
- One unnamed Strahler order two system occurring in the northern part of the study area, fed by two unnamed Strahler order one systems.
- Three unnamed Strahler order one systems distributed across the study area.

These watercourses are mapped in Figure 6 along with their associated riparian and key fish habitat buffer areas (where applicable). These areas are discussed further in **Sections 6.7.5** and **6.7.6**.

6.4.3 Wetlands

Two wetlands are located within the study area. The larger of the two is located along the western border of the study area within the channel zone of Moore Gully. This wetland measures approximately 130 metres by 50 metres and supports PCT 1071 *Phragmites australis* and *Typha orientalis* coastal freshwater wetlands of the Sydney Basin Bioregion (as described in Section 6.3 and shown in Photo 6). This PCT is consistent with the BC Act listed EEC *Sydney Freshwater Wetlands in the Sydney Basin Bioregion*. A variety of native fauna were observed utilising this wetland during the assessment including Common Eastern Froglet *Crinia signifera*, Purple Swamphen *Porphyrio porphyrio*, Dusk Moorhen *Gallinula tenebrosa*, Great Egret *Ardea alba*, Eurasian Coot *Fulica atra*, and Pacific Black Duck *Anas superciliosa*.

The second wetland is located in the south-eastern portion of the study area, close to the key fish habitat buffer associated with Thompsons Creek. This wetland measures approximately 60 metres by 30 metres and supports PCT 781 Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion (as described in Section 6.3 and shown in Photo 2). This PCT is consistent with the BC Act listed EEC *Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions*. Native frog species Common Eastern Froglet was detected at this wetland.

6.4.4 Farm dams

Four farm dams are located within the study area (Figure 6). These dams were all holding water during the field assessment (8 and 9 September 2020), appearing at least 80 % full. All dams supported fringing native aquatic flora species and aquatic macrophytes including Tall Spike Rush *Eleocharis sphacelata*, *Eleocharis acuta*, Tall Sedge *Carex appressa*, Nardoo *Marsilea mutica*, River Buttercup *Ranunculus inundatus,* Water Primrose *Ludwigia peploides* subsp. *peploides,* Water Ribbons, and *Potamogeton tricarinatus*. The dams also displayed evidence of fauna usage with frogs and waterfowl present during survey. Whilst not directly observed there is a high possibility these dams provide habitat for eels and turtles. Aquatic fauna salvage will likely be required prior to any development works. Invasive fish species Eastern Gambusia *Gambusia holbrooki* was not observed however it was detected during fish survey of Moore Gully. As such mitigation measures for this species should also be considered as part of any development works.

Figure 5 Ecological values of the study area

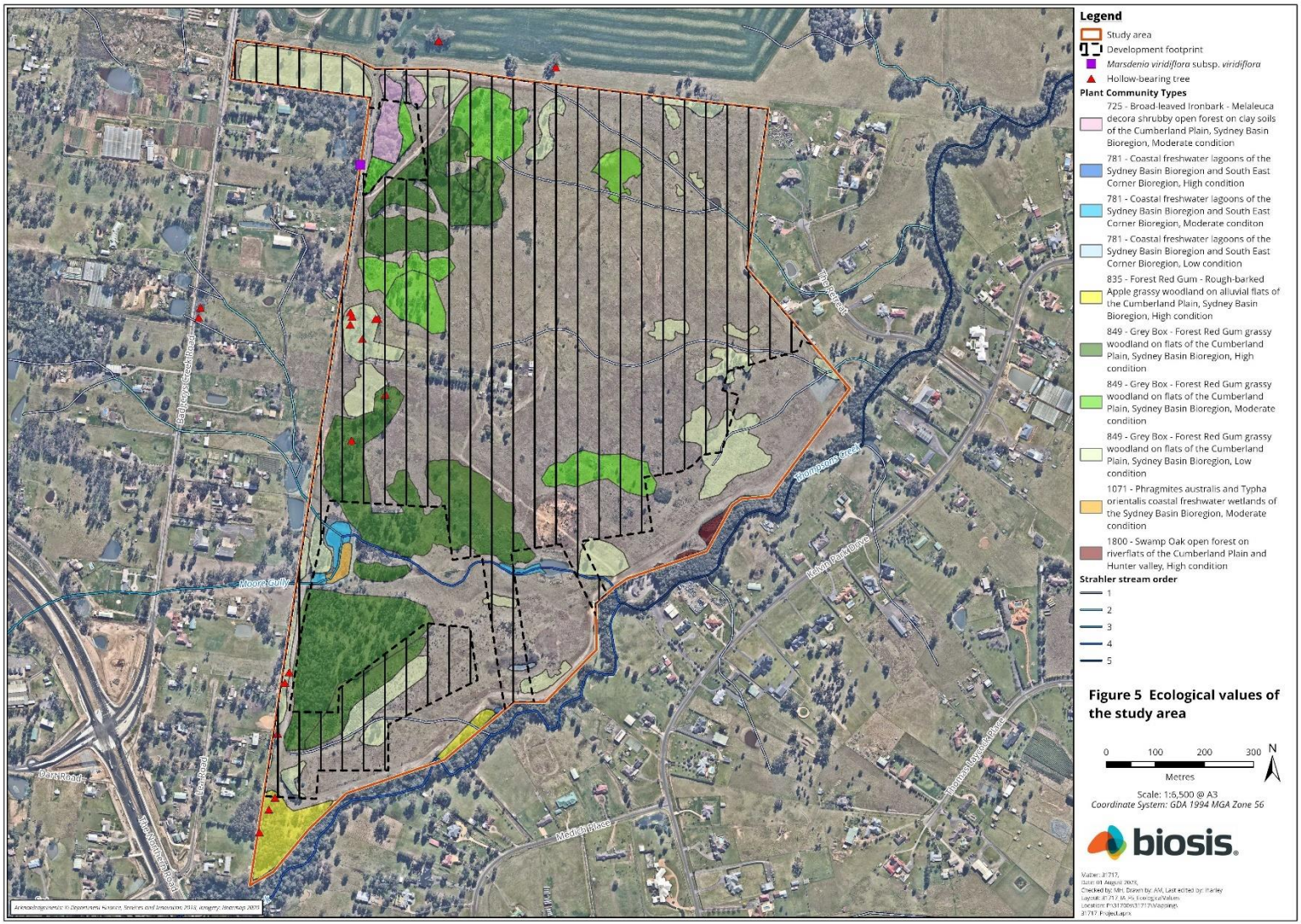
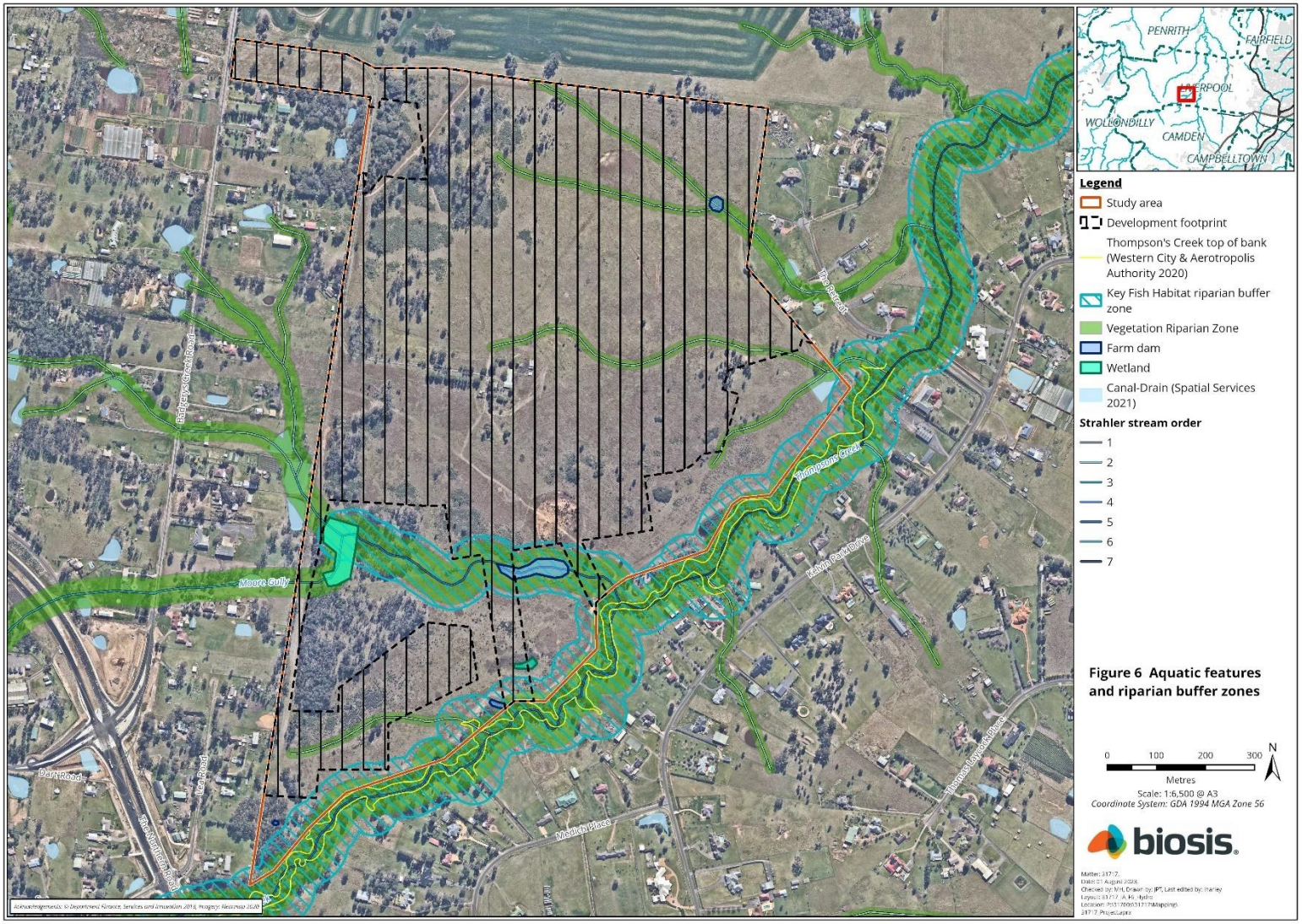


Figure 6 Aquatic features and riparian buffer zones



6.5 Threatened entities

Threatened entities includes all flora and fauna species, populations and ecological communities listed under the EPBC Act and BC Act. Lists of threatened entities recorded or predicted to occur within five kilometres of the study area are provided in Appendix 1 (flora) and Appendix 2 (fauna). An assessment of the likelihood of these species occurring in the study area, and an indication of the likelihood of the project resulting in a significant impact/effect, is included.

No areas of critical habitat for flora or fauna have been declared within the study area. Seven TECs listed under the Commonwealth EPBC Act or NSW BC Act have been mapped within the study area. Seven threatened flora species and 19 threatened fauna species listed under the Commonwealth EPBC Act or NSW BC Act have been identified as having a medium or greater likelihood of occurrence. No aquatic species listed under the FM Act have been identified as being likely to occur within the study area. Table 4 discusses areas of value and potential impacts for all mapped TECs and the threatened species with a medium or greater likelihood of occurrence.

Table 4 Threatened entities likely to occur in the study area

Species name	EPBC Act status	BC Act status	Relevance to study area and potential for impact
Ecological communities			
Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion	CEEC	EEC	1.00 ha of this TEC has been mapped within the study area. Sections of this will be removed under the proposed the Master Plan.
Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions	-	EEC	0.52 ha of this TEC has been mapped within the study area. Sections of this will be removed under the proposed the Master Plan.
River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria (EPBC Act) *River-flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions* (BC Act)	CEEC	EEC	1.73 ha of these TECs (both EPBC Act and BC Act listings) has been mapped within the study area. Sections of this will be removed under the proposed the Master Plan.
Cumberland Plain Shale Woodlands and Shale-	CEEC	-	16.75 ha of this TEC has been mapped within the study area. Sections of this will be removed under

Species name	EPBC Act status	BC Act status	Relevance to study area and potential for impact
Gravel Transition Forest (EPBC Act)			the proposed the Master Plan.
Cumberland Plain Woodland in the Sydney Basin Bioregion (BC Act)	-	CEEC	33.32 ha of this TEC has been mapped within the study area. Sections of this will be removed under the proposed the Master Plan.
Sydney Freshwater Wetlands in the Sydney Basin Bioregion	-	EEC	0.22 ha of this TEC has been mapped within the study area. Sections of this will be removed under the proposed the Master Plan.
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community *Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions*	EEC	EEC	0.35 ha of this TEC has been mapped within the study area. Sections of this will be removed under the proposed the Master Plan.
Flora			
Acacia pubescens Downy Wattle	Vulnerable	Vulnerable	Areas of PCTs 725 and 849 represent potential habitat for this species.
Dillwynia tenuifolia	-	Vulnerable	Areas of PCTs 725 and 849 represent potential habitat for this species.
Grevillea juniperina subsp. *juniperina* Juniper-leaved Grevillea	-	Vulnerable	Areas of PCTs 725 and 849 represent potential habitat for this species.
Grevillea parviflora subsp. *parviflora* Small-flower Grevillea	Vulnerable	Vulnerable	Areas of PCT 725 represent potential habitat for this species.
Marsdenia viridiflora subsp. *viridiflora*	-	Endangered population	Recorded on site during the field investigations undertaken as part of the current assessment. Areas of PCTs 725, 835, 849 and 1800 represent

Species name	EPBC Act status	BC Act status	Relevance to study area and potential for impact
			potential habitat for this species.
Persoonia nutans Nodding Geebung	Endangered	Endangered	Areas of PCT 725 represent potential habitat for this species.
Pimelea spicata Spiked Rice-flower	Endangered	Endangered	Areas of PCT 849 represent potential habitat for this species.
Fauna			
Artamus cyanopterus cyanopterus Dusky Woodswallow	-	Vulnerable	Forest and woodland PCTs (725, 835, 849 and 1800) represent potential foraging and roosting habitat.
Botaurus poiciloptilus Australian Bittern	Endangered	Endangered	Wetland habitats (PCTs 781 and 1071) represent potential habitat for this species.
Callocephalon fimbriatum Gang-gang Cockatoo	Endangered	Vulnerable	Medium and large hollow-bearing trees represent potential breeding habitat for the species. Forest and woodland PCTs (725, 835, 849 and 1800) represent potential foraging habitat for the species.
Chthonicola sagittata Speckled Warbler	-	Vulnerable	Forest and woodland PCTs (725, 835, 849 and 1800) represent potential habitat for the species.
Daphoenositta chrysoptera Varied Sittella	-	Vulnerable	Forest and woodland PCTs (725, 835, 849 and 1800) represent potential habitat for the species.
Falsistrellus tasmaniensis Eastern False Pipistrelle	-	Vulnerable	Hollow-bearing trees represent potential roosting habitat for the species. Forest and woodland PCTs (725, 835, 849 and 1800) represents potential foraging habitat.
Glossopsitta pusilla Little Lorikeet	-	Vulnerable	Hollow-bearing trees represent potential roosting habitat for the species. Forest and woodland PCTs (725, 835, 849 and 1800) with mature flower trees (such as *Eucalyptus* spp., *Corymbia* spp. and *Angophora* spp. represent potential foraging

Species name	EPBC Act status	BC Act status	Relevance to study area and potential for impact
			habitats.
Hieraaetus morphnoides Little Eagle	-	Vulnerable	Grassland areas within the study area represent potential foraging resources. Forest and woodland PCTs (725, 835, 849 and 1800) may support breeding habitat however no breeding individuals were detected during field investigations (Biosis 2020).
Lophoictinia isura Square-tailed Kite	-	Vulnerable	Grassland areas within the study area represent potential foraging resources. Forest and woodland PCTs (725, 835, 849 and 1800) may support breeding habitat however no breeding individuals were detected during field investigations (Biosis 2020).
Melithreptus gularis gularis Black-chinned Honeyeater (eastern subspecies)	-	Vulnerable	Forest and woodland PCTs (725, 835, 849 and 1800) represent potential habitat for the species.
Meridolum corneovirens Cumberland Plain Land Snail	-	Endangered	Areas of leaf litter within PCT 849, particularly around the base of *Eucalyptus tereticornis* and *Eucalyptus moluccana* trees, represent potential habitat for this species. Rubbish such as sheet metal is also utilised by this species as habitat.
Micronomus norfolkensis Eastern Costal Free-tailed Bat	-	Vulnerable	Hollow-bearing trees represent potential roosting habitat for the species. Forest and woodland PCTs (725, 835, 849 and 1800) represents potential foraging habitat.
Myotis macropus Southern Myotis	-	Vulnerable	Hollow-bearing trees represent potential roosting habitat for the species, particularly those in proximity to farm dams, wetlands and watercourses. Forest and woodland PCTs (725, 835, 849 and 1800) area represent potential foraging habitat.
Neophema pulchella Turquoise Parrot	-	Vulnerable	Hollow-bearing trees represent potential breeding habitat for the species. Forest and woodland PCTs (725, 835, 849 and 1800) represent potential foraging habitat for the species.

Species name	EPBC Act status	BC Act status	Relevance to study area and potential for impact
Petauroides volans Greater Glider	Vulnerable	-	Habitat trees containing medium and large hollows represent potential breeding habitat for the species. Forest and woodland PCTs (725, 835, 849 and 1800) within the study area represents potential foraging habitat, particularly those containing mature *Eucalyptus* trees.
Petroica boodang Scarlet Robin	-	Vulnerable	Forest and woodland PCTs (725, 835, 849 and 1800) represent potential habitat for the species.
Phascolarctos cinereus Koala	Endangered	Vulnerable	Eucalyptus trees within the study area represent potential foraging resources for the species. Some additional non-eucalyptus trees within the study area may also be utilised for foraging or dispersal. These areas are associated with Forest and woodland PCTs (725, 835, 849 and 1800).
Saccolaimus flaviventris Yellow-bellied Sheathtail-bat	-	Vulnerable	Hollow-bearing trees represent potential roosting habitat for the species. Forest and woodland PCTs (725, 835, 849 and 1800) represents potential foraging habitat.
Scoteanax rueppellii Greater Broad-nosed Bat	-	Vulnerable	Hollow-bearing trees represent potential roosting habitat for the species. Forest and woodland PCTs (725, 835, 849 and 1800) represents potential foraging habitat, particularly those that are located along riparian corridors.

Known habitats for migratory species have been considered and those recorded in the locality are outlined detailed in **Appendix 2**. These species may use the study are on occasion for foraging, however the study area does not provide habitat for an ecologically significant proportion of migratory species.

6.6 Ecological impacts

This section identifies the potential impacts of the Master Plan on the ecological values of the study area.

6.6.1 Impacts to terrestrial and aquatic values

The principal means to reduce impacts on ecological values will be to minimise removal of native vegetation and habitat. The proposal retains the native vegetation at Ridge Park and south of Moore Gully. Under the current proposal, 24.60 hectares of native vegetation are proposed to be removed from the study area.

The majority of impacted native vegetation (24.07 hectares or 98 %) occurs as patches of PCT 849 in the western half of the study area in low, moderate and high conditions. As outlined in **Table 3**, high condition PCT

849 satisfies the key diagnostic features of the EPBC Act listed CEEC *Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest*. All three condition types (low, moderate and high) satisfy the diagnostic features of the BC Act listed CEEC *Cumberland Plain Woodland in the Sydney Basin Bioregion*.

The study area has a history of past disturbance, associated with its historical use as the RAAF Bringelly Telecommunications Unit, and it appears as though clearing of native vegetation and ground disturbance was undertaken as part of its prior land use. However, as outlined in the Final Determination for the BC Act listed *Cumberland Plain Woodland in the Sydney Basin Bioregion* (NSW Scientific Committee 2009), the community is known to persist following total or partial clearing. It is not uncommon for contemporary tree-dominated stands of the community to exist largely as relics or regrowth of what were originally taller forests and woodlands. Following clearing and during subsequent regrowth, the tree canopy may also remain sparse or may regrow to form dense stands of saplings and small trees, or in some cases the upper or mid storey may be absent from the community. The remaining areas of this community are also severely fragmented with half of all mapped patches being smaller than 3 hectares (NSW Scientific Committee 2009).

Whilst some the vegetation with the study area presents as fragmented patches of woodland or regrowth saplings or shrubs, this is not inconsistent with the areas of this CEEC that remain across its distribution. As highlighted in Section 6.3 (Table 3) patches of this community within the study area also included high quality DNS and DNG which were directly linked to the high-quality vegetation patches.

The development footprint of the Master Plan is shown in Figure 7. Native vegetation that will be removed as a result of the Master Plan is shown in Table 5. TECs that will be removed as a result of the Master Plan are shown in Table 6. A summary of all impacts to ecological values within the study area is detailed in Table 7.

Table 5 Native vegetation to be removed from the development footprint

PCT	Condition	Proposed impact (ha)
725 Broad-leaved Ironbark – Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion	Moderate	0.41
781 Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion	Moderate	0.08
835 Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion	High	0.03
849 Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion	High	10.33
	Moderate	5.45
	Low	8.29

Table 6 TECs to be removed from the development footprint

TEC	Proposed impact (ha)
Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion (BC Act)	0.41
Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions (BC Act)	0.08
River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria (EPBC Act) *River-flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions* (BC Act)	0.03
Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest (EPBC Act)	10.33
Cumberland Plain Woodland in the Sydney Basin Bioregion (BC Act)	24.07

Table 7 Ecological values and impacts

Ecological value	Impacts
Native vegetation	24.60 ha of native vegetation occurs within the Master Plan development footprint and is likely to be cleared. This includes vegetation that meets the listing criteria of two TECs under the EPBC Act and four TECs under the BC Act (as outlined in **Table 6**). A further 12.47 ha of native vegetation occurs within areas identified as open space for the regional parkland and Ridge Park under the Master Plan (**Figure 3**). Most native vegetation within these areas is likely to be retained, with these areas also likely to be subject to substantial revegetation. Under Section 2.4 (Vegetation and Biodiversity) of the Phase 2 DCP a minimum tree canopy of 45 % for open space is to be achieved. These open space areas also include 6.60 ha of ENV which has been protected through zoning as Environment and Recreation (ENZ) under State Environmental Planning Policy (Precincts—Western Parkland City) Amendment (Miscellaneous) 2022.
Hollow-bearing trees	11 hollow-bearing trees have been mapped within the Master Plan development footprint. These trees support 12 small hollows (< 50 mm diameter), and 9 medium hollows (50 – 149 mm diameter). Three hollow-bearing trees within the study area occur outside of the development footprint and are therefore avoided. These trees support 1 small hollow, 3 medium hollows, and 1 large hollow (150 – 400 mm diameter).

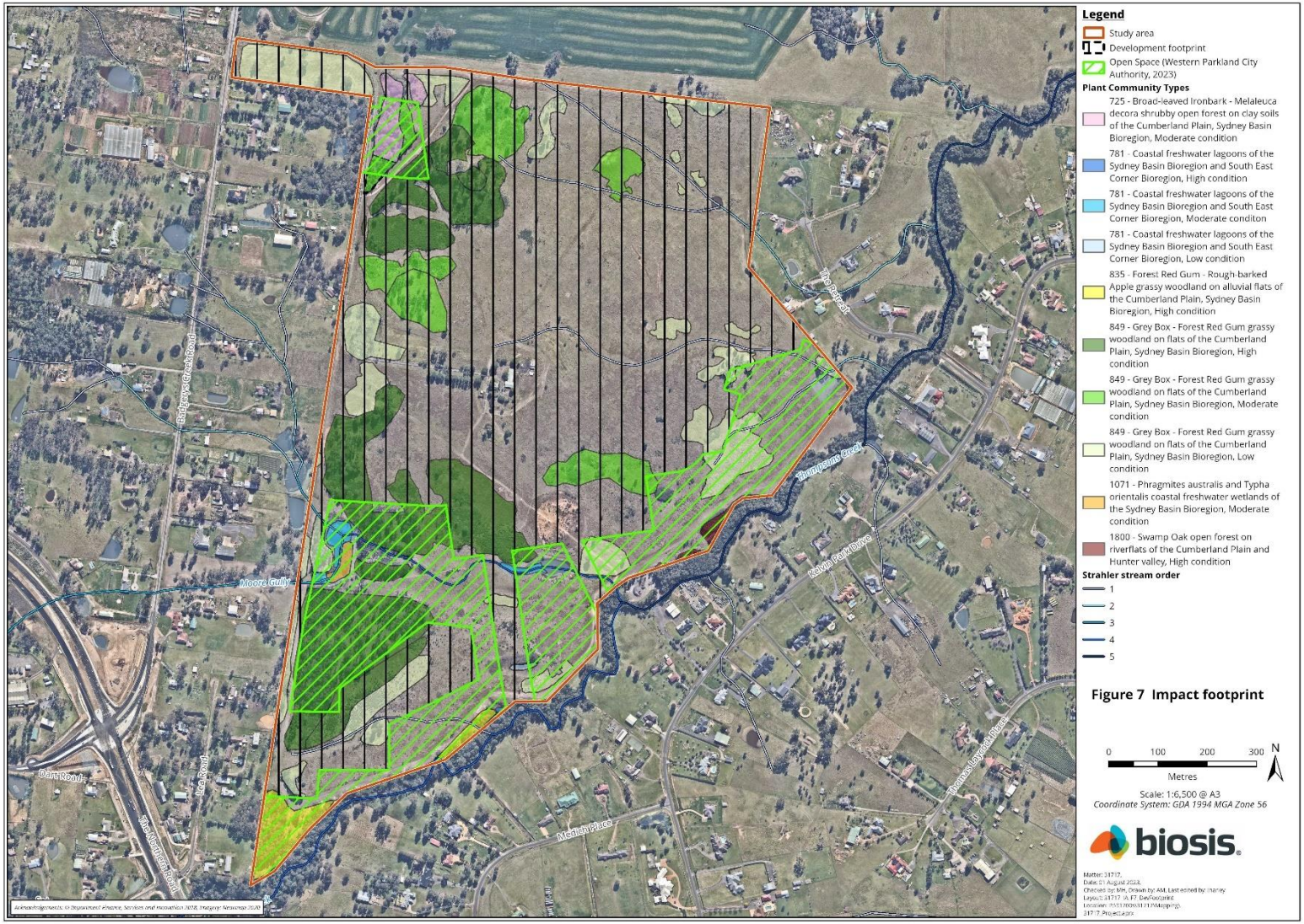
Ecological value	Impacts
Moore Gully	Impacts to Moore Gully are mostly avoided by the proposed Master Plan, with a large portion of the mapped watercourse occurring within the Open Space area (Figure 7).The Moore Gully area includes the future infrastructure corridor as identified in *State Environmental Planning Policy (Transport and Infrastructure) 2021* and a roadway as provided in the Precinct Plan. When constructed these may have impact upon Moore Gully. The future infrastructure corridor is located at the easternmost extent of Moore Gully in the study area, near its interface with Thompsons Creek, whilst the roadway is located at its westernmost extent, west of the existing wetland (Figure 6). Details of the proposed construction of these corridors is not currently available. Impacts to Moore Gully associated with these two transit corridors will also occur within the VRZ buffer, required under the WM Act. Further discussion of these impacts are outlined in Section 6.7.6 which includes an assessment against the WM Act. A more detailed assessment will be provided in Stage 2 once the water basin parameters are confirmed and commitment from NSW Government in relation to the future rail corridor
Unnamed waterways	Five unnamed Strahler order one watercourses and one unnamed Strahler order two watercourse, and their associated riparian buffer zones will be wholly or partly impacted by the proposed Master Plan. The riparian zones associated with these watercourses have been significant modified due to past disturbance within the study area and in some cases the vegetation is completely absent. Further discussion of riparian zones and requirements for these waterways are outlined in Section 6.7.6 which includes an assessment against the WM Act.
Farm dams	One farm dam occurs within the development footprint, located to the north-east of the study area. Three farm dams occur outside of the development footprint, including one large dam located along Moore Gully. It is likely that these dams, whilst outside of the development footprint, will be modified at some point as they occur within the natural areas to be enhanced as part of the open space strategy.
Key fish habitat	Moore Gully and Thompsons Creek are considered key fish habitat and a 50 m key fish habitat buffer is required as outlined in Section 6.7.5.1. Impacts to the Moore Gully and Thompsons Creek key fish habitat buffers are mostly avoided by the proposed Master Plan. The exception being in the vicinity of the two transit corridors (see Moore Gully item above). Additionally, there is some minor encroachment along the northern buffer zone of Moore Gully and in the southern part of the study area with the Thompsons Creek buffer zone (Figure 6).

The results of this impact assessment should be used to inform the further design of the development. Recommendations are outlined in Section 7 on how best to avoid, mitigate or offset these impacts. The design phase of future developments within the Master Plan area will be critical to determining specifics of how ecological values will be incorporated and managed.

6.6.2 Master Plan report Open Space Strategy

The Master Plan Report which includes public domain and landscape chapters outlines how the open space areas that are being retained across the study area will function and be enhanced. Current areas of native vegetation within the study area that are expected to retain much of their existing characteristics and functionality include the Ridge Park, which occurs in the north-western section of the study area, as well as the riparian zone associated with Moore Gully. These areas have been excised from the Master Plan development footprint as the native vegetation in these areas is being primarily retained or enhanced. Whilst some clearance of native vegetation within these areas may be required to allow for the development of public parks and walkways, the revegetation and enhancement within these areas is expected to compensate for these losses. The Master Plan also preserves ENV land within the open space area consistent with the protected existing native vegetation detailed in **Figure 7** of the Western Sydney Aerotropolis Precinct Plan. The area covered by the Public Open Space is included in **Figure 7**.

Figure 7 Development footprint



6.7 Assessment against key biodiversity legislation

6.7.1 *Environment Protection and Biodiversity Conservation Act 1999*

An assessment of the impacts of the proposed development on Matters of NES, as outlined in, Matters of National Environmental Significance Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth of Australia 2013) is detailed below. Typically impacts to Matters of NES require further assessment, with any actions likely to cause significant impact requiring referral to the Commonwealth Minister for the Environment. However, in 2011 the Commonwealth Environment Minister endorsed the actions associated with the development of the Western Sydney Growth Centres as described in the Sydney Growth Centres Strategic Assessment Program Report (DECCW 2010). This approval was made under section 146B of the EPBC Act which has the same effect as an approval granted to development under Part 9 of the EPBC Act. Therefore, with this approval, any development within the prescribed certified lands will not require separate referral, assessment of approval under the EPBC Act to be taken.

This approval had effect for the following Matters of NES under the EPBC Act:

- World Heritage properties.
- National Heritage places.
- Wetlands of international importance.
- Listed threatened species and ecological communities.
- Listed migratory species.

Impacts to Matters of NES associated with the Master Plan are restricted to these prescribed certified lands and therefore further assessment is not required. A summary of the Matters of NES relevant to the Master Plan are summarised in **Table 8.**

Table 8 Assessment of the Master Plan against the EPBC Act

Matter of NES	Master Plan specifics	Assessment against Commonwealth of Australia (2013)
Threatened species (flora and fauna)	18 flora species and 21 fauna species listed under the EPBC Act have been recorded or are predicted to occur in the locality. An assessment of the likelihood of these species occurring in the study area is provided in Table A.2 of Appendix 1 (flora) and Table A.4 of Appendix 2 (fauna).	4 threatened flora and 4 threatened fauna species listed under the EPBC Act were determined to have a moderate of greater likelihood of occurrence within the study area. Assessment of these threatened species is not required as the impacts associated with the Master Plan are restricted to prescribed certified lands. These areas have been previously assessed and approval granted under the *Sydney Growth Centres Strategic Assessment Program Report* (DECCW 2010) which has been endorsed by the Commonwealth Environment Minister.
Threatened ecological	The Master Plan will result in the permanent removal of the following EPBC Act listed TECs from within the	Assessment of these TECs is not required as the impacts associated with the Master Plan are restricted to prescribed certified lands.

Matter of NES	Master Plan specifics	Assessment against Commonwealth of Australia (2013)
communities	development footprint: • 0.41 ha of *Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion*. • 0.03 ha of *River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria.* • 10.33 ha of *Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest*.	These areas have been previously assessed and approval granted under the *Sydney Growth Centres Strategic Assessment Program Report* (DECCW 2010) which has been endorsed by the Commonwealth Environment Minister.
Migratory species	14 migratory species have been recorded or are predicted to occur in the locality (Table A.5 of Appendix 2).	While some of these species would be expected to use the study area on occasions, some may do so regularly, and others may be resident. The study area does not provide important habitat for an ecologically significant proportion of any of these species. Assessment of these migratory species is not required as the impacts associated with the Master Plan are restricted to prescribed certified lands. These areas have been previously assessed and approval granted under the *Sydney Growth Centres Strategic Assessment Program Report* (DECCW 2010) which has been endorsed by the Commonwealth Environment Minister.
Wetlands of international importance (Ramsar sites)	There are 12 Ramsar sites in NSW, the closest one being Towra Point Nature Reserve in Kurnell, south of Sydney city.	The study area does not flow directly into a Ramsar site, and the development is not likely to result in a significant impact. Assessment is not required as the impacts associated with the Master Plan are restricted to prescribed certified lands. These areas have been previously assessed and approval granted under the *Sydney Growth Centres Strategic Assessment Program Report* (DECCW 2010) which has been endorsed by the Commonwealth Environment Minister.

6.7.2 *Environment Planning and Assessment Act 1979*

A total of 7 threatened flora species, 18 threatened fauna species and 6 TECs listed under the BC Act were identified as having a medium or greater likelihood of occurrence. Usually, further assessment of impacts would be required for these entities in the form of a ToS. However, the development footprint associated with the Master Plan is restricted to areas mapped as certified under the Growth Centres Biodiversity Certification Order. As such further assessment of impacts to these entities is not required.

6.7.3 *Western Parkland City SEPP – Chapter 3 (Sydney Region Growth Centres)*

Relevant Biodiversity Measures

A total of 41 RBMs are included under Schedule 1 (Condition of Biodiversity Certification) of the Growth Centres Biodiversity Certification Order. Of these, 18 are of relevance to the proposed Master Plan. An assessment of the plan against these RBMs is provided in Table 9.

6.7.3.1.1 Consideration of existing development proposals

A small portion of the mapped ENV is located within the Primary arterial road (rapid bus) corridor and the disturbance footprint of the temporary north/south access road connecting the First Building to the Sydney Metro constructed access road through to Badgerys Creek Road. This matter was assessed and resolved as part of the First Building DA. Of further note, the vegetation within the First Building footprint is not within the protected area and the vegetation to be cleared is on land certified under the 2007 Biodiversity Certification Order for State Environmental Planning Policy (Sydney Region Growth Centres) 2006.

Notwithstanding the above and to mitigate our impact we have made a commitment to DPE to minimise the disturbance and removal of trees within the ENV area. This includes identification of trees to be removed or retained prior to commencing construction and tree protection measures consistent with AS 4970 will be implemented for those trees to be retained. We are also collecting native seeds, tree hollows, tree trunks and root balls from the site to be reused in future landscaping or habitat relocation and have committed to undertake additional plantings within the broader precinct to ensure no net loss of tree canopy cover as a result of the development.

The site of the AMRF First Building is consistent with the layout of the broader Bradfield masterplan and aligns with the planned road network and public transport network under the masterplan. The 15th Avenue corridor is established under the Western Parkland City Precincts SEPP and the First Building aligns with this corridor. The north/south access road that slightly traverses through the ENV and Environment and Recreation Zone (ENZ) is utilising and widening an existing access track and is temporary in nature and not a long-term traffic solution. When appropriate and after direct east/west access from Badgerys Creek Road is secured, the temporary road will be removed. The area will then be revegetated and turned into open space which is in accordance with both the Master Plan and SEPP, being ENZ zoned/ENV protected and utilised as local open space.

Table 9 Assessment of the Master Plan against the listed RBMs

Relevant Biodiversity Measure	Consistency with the Master Plan study area
General	
4 Copies of all final reports, maps, reviews, plans and monitoring data referred to in the conditions of biodiversity certification must be held by the GCC and made publicly available, either on request and/or by a mechanism that is broadly publicly accessible. This does not apply to material that is commercially sensitive or contains sensitive information regarding the location of threatened species, populations or ecological communities or their habitat.	The Master Plan must be published on the NSW planning portal and takes effect on the day it is so published, as per clause 5, section 4.41 of the Western Parkland City SEPP.
Native vegetation to be retained within the Growth Centres	
6 A minimum of 2,000 hectares of existing native vegetation must be retained and protected within the Growth Centres, either within the certified areas and/or the non-certified areas, subject to conditions 7 to 13 below.	The Master Plan is conserving 6.60 ha of validated ENV within the study area as part of Ridge Park and the regional parkland south of Moore Gully.
7 During the precinct planning process, the GCC may determine to make areas of existing native vegetation within the non-certified areas available for development if the clearance of such vegetation is considered necessary for either the provision of essential infrastructure and/or to meet the required Development Parameters specified in the Growth Centres Development Code.	No clearing of ENV within the non-certified areas is proposed under the Master Plan. As such further consideration of this RBM is not required.
8 In making a determination under condition 7, the GCC must demonstrate by way of information provided during the public exhibition of the precinct plan (where that exhibition occurs after this order takes effect) that the clearing of any existing native vegetation in the non-certified areas will be offset by:	No clearing of ENV within non-certified areas is proposed under the Master Plan. As such further consideration of this RBM is not

Relevant Biodiversity Measure	Consistency with the Master Plan study area
a. the protection of an equal or greater area of existing native vegetation elsewhere in the Growth Centres; and/or b. the revegetation and/or restoration of an area of land elsewhere in the Growth Centres, subject to satisfying the following, i. that the clearance of existing native vegetation in the non-certified areas will not affect the capacity to achieve overall improvement or maintenance of biodiversity values for threatened species, populations and ecological communities and their habitats, ii. the revegetated and/or restored areas will be protected, iii. the extent of revegetation and/or restoration compared to clearing of existing native vegetation must be undertaken at a ratio of at least 3:1 (to reflect the greater ecological risks relative to retaining existing native vegetation), iv. areas subject to revegetation and/or restoration must be of a suitable boundary configuration and design to support long-term management, v. revegetation and/or restoration of the proposed areas would not be undertaken under another scheme or regulatory requirement already in operation at the time that the clearing is approved (this includes but is not limited to any approvals, and associated conditions of such approvals, that may be required under the *Rivers and Foreshores Improvement Act 1948* and *Water Management Act 2000*), vi. revegetation and/or restoration will be undertaken by suitably qualified and experienced persons using indigenous plant stock, and vii. sufficient resources will be made available to undertake the revegetation and/or restoration and any necessary follow-up maintenance and monitoring for a minimum period of 5 years following the commencement of the revegetation and/or restoration.	required

Relevant Biodiversity Measure	Consistency with the Master Plan study area
9 Revegetation and/or restoration may be partly counted towards meeting the overall requirement to protect 2,000 hectares of existing vegetation required in condition 6. The amount that may be counted shall be calculated by dividing the total area of revegetation and/or restoration required under condition 8b(iii) by 3. Note: for example, if 9 hectares of revegetation is undertaken then 3 hectares may be counted.	Not applicable.
10 In the non-certified areas, proposals to clear existing native vegetation shall be subject to the relevant development controls in the SEPP and *Sydney Regional Environmental Plan No. 31 – Regional Parklands*, and the requirements of the *Environmental Planning and Assessment Act 1979*.	No development is proposed within non-certified areas under the Master Plan.
11 Where there are essential infrastructure proposals, including but not limited to proposals under Part 3A of the *Environmental Planning and Assessment Act 1979*, that involve clearing of existing native vegetation in the non-certified areas and that do not require development consent under the SEPP, such clearing must be offset by applying the same requirements specified in condition 8 above. In this case the offsets may be located outside of the Growth Centres (but within the Cumberland Plain of Western Sydney, as defined in condition 32) if the GCC is satisfied that there are no practicable offset options within the Growth Centres and all other requirements of condition 8 will be met. However, any offsets outside the Growth Centres cannot be counted towards meeting the requirements of condition 6.	No development is proposed within non-certified areas under the Master Plan.
12 Notwithstanding any other conditions of biodiversity certification, in the lands marked by a red hatching on the biodiversity certification maps existing native vegetation must not be cleared unless it is in accordance with a plan of management or unless such clearance has been agreed to by the DECC.	No clearing is proposed within lands marked by red hatching on the biodiversity certification maps under the proposed Master Plan.
13 If new information becomes available after the biodiversity certification order took effect that demonstrates that the vegetation within an area does not otherwise meet the definition of existing native vegetation, then for the purposes of conditions 7 to 8 and condition 11 to 12 only the area of confirmed existing native vegetation shall be considered.	Biosis undertook field investigation of the study area and confirmed of the 10.89 ha of ENV originally mapped across the study area, 8.76 ha still existed,

Relevant Biodiversity Measure	Consistency with the Master Plan study area
	of which 6.60 ha will be retained in open space areas. These areas will be protected through the Environment and Recreation (ENZ) zoning that has been applied to these areas under the State Environmental Planning Policy (Precincts—Western Parkland City) Amendment (Miscellaneous) 2022. No clearing of ENV within areas mapped as non-certified will occur as a result of the proposed Master Plan.
Additional conservation actions within Growth Centres – native vegetation	
14 During or before the preparation of the relevant precinct plan(s) under the Growth Centres Development Code, a further detailed assessment must be undertaken of the areas adjoining or proximate to the Shanes Park Air Services Australia site marked in blue hatching on the biodiversity certification maps.	Not applicable. The study area does not include the Shanes Park Air Services Australia site.
15 The assessment referred to in condition 14 must examine whether the areas meet the criteria specified in Schedule 3.	Not applicable. The study area does not include the Shanes Park Air Services Australia site.
16 Based on the outcomes of the assessment the DECC shall provide advice to the Minister on whether the areas should be included within the certified areas or the non-certified areas shown on the biodiversity certification maps.	Not applicable. The study area does not include the Shanes Park Air Services Australia site.

Relevant Biodiversity Measure	Consistency with the Master Plan study area
Additional conservation actions within Growth Centres - plants	
17 During or before the preparation of the relevant precinct plan(s) under the Growth Centres Development Code relating to the areas referred to in the table below, the following actions must be undertaken:	Not applicable. The study area does not include any of these locations. Populations of these species were not detected during field investigations however targeted searches were not undertaken.

Species	Required action
Acacia pubescens	Potential populations at Cross Street, Kemps Creek and Thirtysecond Avenue, Austral – as shown in black hatching on the biodiversity certification maps: ▪ survey to confirm the presence of the species, and ▪ if the species is present, provide for the protection of the area of suitable habitat for the species to the satisfaction of the DECC.
Pimelea spicata	Potential populations at Denham Court Road - as shown in black hatching on the biodiversity certification maps: ▪ survey to confirm the presence of species, and ▪ if the species is present, provide for the protection of the area of suitable habitat
Persoonia hirsuta	Potential populations at North Kellvville – as shown in black hatching on the biodiversity certification maps: ▪ survey to confirm the presence of the species, and ▪ if the species is present, provide for the protection of the area of suitable habitat for the species to the satisfaction of the DECC.
Leucopogon fletcheri	Known population at North Kellyville - as shown in black hatching on the biodiversity certification maps: ▪ survey to confirm the extent of the population, and ▪ provide for the protection of the population to the satisfaction of the DECC.
Darwinia biflora *Hibbertia superans* *Epacris purpurascens* var *purpurascens*	Known populations at North Kellyville - as shown in black hatching on the biodiversity certification maps: ▪ survey to confirm the extent of the populations, and ▪ provide for the protection of the populations to the satisfaction of the DECC.

Relevant Biodiversity Measure		Consistency with the Master Plan study area
Eucalyptus sp "Cattai"		
Additional conservation actions within the Growth Centres - animals		
18. During or before the preparation of the relevant precinct plan(s) under the Growth Centres Development Code relating to the area referred to in the table below, the following actions must be undertaken:		Not applicable. The study area does not include this location.
Species	Required action	
Green and Golden Bell Frog	Potential population at Riverstone - as shown in black hatching on the biodiversity certification maps: Option 1 ▪ survey to confirm the presence of the species, and ▪ if the species is present, provide protection of the area of suitable habitat for the species to the satisfaction of the DECC. Option 2 ▪ • if the species is present at Riverstone but cannot be adequately protected to the satisfaction of the DECC, then: (a) undertake targeted survey to confirm the presence of the species elsewhere in the Growth Centres, and (b) if the species is present elsewhere in the Growth Centres, provide for the protection of an area(s) of suitable habitat for the species to the satisfaction of the DECC.	
Additional conservation actions within the Growth Centres – development sites		
19 Within twelve months of the biodiversity certification order taking effect, the GCC (in consultation with the DECC) must put in place procedures so that all future precinct plans (excluding any plans that were publicly exhibited before the biodiversity certification order took effect), where practicable, provide for the appropriate re-use of: a. native plants (including but not limited to seed collection) and the relocation of native animals from		Provisions for the protection of native vegetation and biodiversity, including preferred plant species lists and relocation of native animals are detailed in section 5.3.2 of the Aerotropolis

Relevant Biodiversity Measure	Consistency with the Master Plan study area
development sites, prior to development commencing; and b. top soil from development sites that contain known or potential native seed bank. For the purposes of condition 19a and 19b appropriate uses may include, but are not limited to, application in re-vegetation or restoration works and landscaping in the Growth Centres.	Phase 2 DCP.
Future precinct plans	
35 During the preparation of future precinct plans (excluding any precinct plans already publicly exhibited before this order took effect) the GCC must undertake and make publicly available an assessment of the consistency of the proposed precinct plan with the conditions of biodiversity certification. This may occur during or before any public exhibition of future draft precinct plans.	This assessment reviews the RBMs that are relevant to the proposed development outlined in the Master Plan.
Future threatened species listings or discoveries	
36 Where a preliminary determination is made under the Act to list a species, population or ecological community, and that species, population or ecological community may or is known to occur within the Growth Centres, then the GCC must (as soon as practicable) provide advice to the DECC on whether: a. the species, population or ecological community is known or likely to be present in the Growth Centres; b. it was considered during the preparation of the draft Growth Centres Conservation Plan by the GCC; and c. whether the SEPP, and related measures, provides adequate protection for the species, population or ecological community.	Not applicable.
37 Based on the information provided in accordance with condition 36, and any other relevant matters, the DECC shall advise the Minister on whether to formally review, maintain, modify, suspend or revoke the biodiversity certification of the SEPP if the species, population or ecological community is listed under the Act.	Not applicable.

6.7.4 *Biodiversity Conservation Act 2016*

An assessment of the likelihood of threatened entities occurring within the study area is provided in Appendix 1 (flora) and Appendix 2 (fauna). As the impacts associated with the proposed Master Plan are restricted to areas that have been granted biodiversity certification, further assessment of these threatened entities through completion of ToS are not required. The effect of biodiversity certification under Section 8.4 of the BC Act is as follows:

> (1) **State significant infrastructure under Part 5.1 of the Planning Act** The environmental assessment requirements for the approval of State significant infrastructure under Part 5.1 of the EP&A Act do not require an assessment of the impact of the infrastructure on biodiversity to the extent that the infrastructure is carried out or proposed to be carried out on biodiversity certified land.
>
> (2) **Development (including State significant development) under Part 4 of the Planning Act** An assessment of the likely impact on biodiversity of development on biodiversity certified land is not required for the purposes of Part 4 of the EP&A Act.
>
> (3) A consent authority, when determining a development application in relation to development on biodiversity certified land under Part 4 of the EP&A Act, is not required to take into consideration the likely impact on biodiversity of the development carried out on that land.
>
> (4) **Activities under Part 5 of the Planning Act** An activity to which Part 5 of the EP&A Act applies which is carried out or proposed to be carried out on biodiversity certified land is taken, for the purposes of Part 5 of that Act, to be an activity that is not likely to significantly affect any threatened species or ecological community under this Act, or its habitat, in relation to that land.
>
> (5) A determining authority under Part 5 of the EP&A Act is not required under that Part to consider the effect on biodiversity of an activity to the extent that it is carried out on biodiversity certified land.
>
> (6) **This section prevails** This section has effect despite anything to the contrary in the EP&A Act or Part 7 of this Act.

However, as outlined above, biodiversity certification under the BC Act has been granted within areas mapped as "certified" under Chapter 3 (Sydney region growth centres) of the Western Parkland City SEPP. As such further assessment of impacts to these BC Act listed threatened species and communities within the certified area is not required and the BOS is not triggered. A SIS or BDAR is therefore not required.

6.7.5 *Fisheries Management Act 1994*

One of the key objectives of the FM Act is to conserve 'key fish habitats'. Key fish habitats underpin the approach applied by NSW DPI to ensure effort and resources are focused on habitats that are of a high priority to the conservation of fisheries. Key fish habitats are not defined in the FM Act, with their classification instead following the *Policy and guidelines for fish habitat conservation and* management (Fairfull 2013), which involves the visual assessment of waterways based on the TYPE (sensitivity of key fish habitat present) and CLASS (classification of the waterway for fish passage).

The extent of Moore Gully within the study area conforms to TYPE 1 - highly sensitive key fish habitat on the basis of the following characteristics:

- The chain of ponds waterway form that covers the extent of Moore Gully within the study area, excluding the constructed dams, support the native aquatic plant species River Buttercup and Water Couch *Paspalum distichum* throughout the channel zone.
- Both on-line dams also contain native aquatic vegetation.

- Several other plant species representative of wetland conditions occur throughout the channel zone in areas that are clearly inundated or contain surface water for significant periods.
- Large woody debris greater than 300 mm in width is present in limited amounts and areas.

The extent of Moore Gully with the study area conforms to CLASS 2 – moderate key fish habitat based on the following characteristics:

- Moore Gully is an intermittently flowing named waterway.
- Semi-permanent to permanent water is present in pools or in connected wetland areas along the extent of Moore Gully.
- Species of freshwater aquatic vegetation are present along the waterway.
- TYPE 1 habitats are present.
- Defined bed and banks for this waterway form are present. In discontinuous section this is evidenced by the channel zone occupying the low points of the landscape and the presence of wetland or aquatic vegetation affirming the permanence of water in these areas.

These findings are supported by the Fisheries NSW Spatial Data Portal (DPI 2021) which maps Moore Gully as key fish habitat. Thompsons Creek has also been mapped as key fish habitat and, whilst a full aquatic assessment of this watercourse is beyond the scope of this assessment, it is likely to conform to a TYPE 1, CLASS 2 classification under Fairfull (2013).

6.7.5.1.1 Key Fish Habitat riparian buffer zones

In order to protect key fish habitat, Fairfull (2013) states that a riparian buffer zone should be measured from the top of the bank/drainage depression along CLASS 1 to 3 waterways, with the width of the riparian corridor based on the habitat TYPE and waterway CLASS. For TYPE 1, CLASS 2 waterways (which includes Thompsons Creek and Moore Gully), a 50-metre buffer zone is recommended. Any development within this buffer zone will require liaison with DPI Fisheries and has potential for additional aquatic assessment requirements. This buffer zone may be able to be reduced through liaison with DPI.

The 50-metre buffer zone has been mapped along Thompsons Creek and Moore Gully in Figure 6. Note that top of bank mapping is only available along Thompsons Creek (and not in its entirety), outside of this area the buffer is based on the mapped hydroline only.

Under Fairfull (2013), Strahler order one and two watercourses are not considered key fish habitat. Similarly farm dams on Strahler order one or two streams, or unmapped gullies are also not considered key fish habitat.

A more detailed assessment will be provided in Stage 2 once the water basin parameters are confirmed.

6.7.5.1.2 Threatened species

As outlined in Section 6.5, no species listed under the FM Act were identified as likely to occur within the study area. As such a test of significant effect on threatened species, populations or ecological communities, or their habitats, as outlined in section 220ZZ of the FM Act is not required. A SIS is therefore not required.

6.7.6 *Water Management Act 2000*

Impacts to riparian zones are also protected under the WM Act, guided by the Guidelines for controlled activity on waterfront land – Riparian corridors (NSW Office of Water 2012). Works within 40-metres of the top bank of mapped watercourses will need to be consistent with the riparian corridor matrix which requires a VRZ be preserved. The VRZ buffer applies to each side of the watercourse, measured from top of bank, and is based on the watercourse Strahler order. The buffers required are as follows:

- Strahler order one – 10-metre buffer (each side).

- Strahler order two – 20-metre buffer (each side).
- Strahler order three – 30-metre buffer (each side).
- Strahler order four and greater – 40-metre buffer (each side).

Five unnamed Strahler order one watercourses and one unnamed Strahler order two watercourse occur within the development footprint (Figure 6). These watercourses have riparian buffers of 10-metres and 20-metres respectively. Moore Gully (Strahler order 4) and Thompsons Creek (Strahler order 5) both have riparian buffers of 40 metres. The development footprint includes sections of the Moore Gully riparian zone where the transit corridors cross at the eastern and western most extents of the watercourse within the study area. Whilst parts of the Thompsons Creek riparian buffer occur within the study area, impacts under the proposed Master Plan are currently avoided. Buffers for all of these watercourses have been mapped in Figure 6.

Liaison with DPI should be undertaken regarding potential impacts to these riparian corridors. In some instances, due to the degraded nature of the riparian corridor, this may reduce the width of riparian corridor buffer required. Any development within 40-metres of a watercourse will also require a controlled activity permit from the NRAR. An exemption for controlled activity approval does apply for major projects which are state significant development or state significant infrastructure.

A more detailed assessment will be provided in Stage 2 once the water basin parameters are confirmed.

6.7.7 *Biosecurity Act 2015*

Nine priority weeds for the Greater Sydney Local Land Services region, which includes the Liverpool Council LGA, have been recorded in the study area, and are listed in Table 10, along with their associated Biosecurity Duty in accordance with the Biosecurity Act.

The Biosecurity Act provides for the identification, classification and control of priority weeds with the purpose of determining if a biosecurity risk is likely to occur. A priority weed is any weed identified in a local strategic plan, for a region that includes that land or area, as a weed that is or should be prevented, managed, controlled or eradicated in the region.

The General Biosecurity Duty as outlined in the Biosecurity Act states:

> *All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.*

Table 10 Priority weeds within the study area

Scientific name	Common name	Relevant biosecurity duty
Asparagus aethiopicus	Ground Asparagus	General Biosecurity Duty
Asparagus asparagoides	Bridal Creeper	General Biosecurity Duty
Eichhornia crassipes	Water Hyacinth	General Biosecurity Duty
Lantana camara	Lantana	General Biosecurity Duty

Scientific name	Common name	Relevant biosecurity duty
Lycium ferocissimum	African Boxthorn	General Biosecurity Duty
Olea europaea subsp. *cuspidata*	African Olive	**Regional Recommended Measure** Exclusion zone is established for all lands in Blue Mountains City Council local government area and in Penrith local government area west of the Nepean River. Core area: The remainder of the region. Whole region: The plant or parts of the plant are not traded, carried, grown or released into the environment. Exclusion zone: The plant is eradicated from the land and the land kept free of the plant. Core infestation area: Land managers prevent spread from their land where feasible. Land managers reduce impacts from the plant on priority assets
Opuntia sp.	Prickly pears	General Biosecurity Duty
Rubus fruticosus sp. agg.	Blackberry	General Biosecurity Duty
Senecio madagascariensis	Fireweed	General Biosecurity Duty

To prevent biosecurity impacts from occurring as a result of the presence of the above listed priority weeds within the study area, all practical steps should be taken to control and eradicated the weeds from the study area as per the relevant biosecurity duties outlined above, or prior to or during any future vegetation removal.

6.7.8 *Western Parkland City SEPP – Chapter 4 (Western Sydney Aerotropolis)*

Wildlife hazards

Section 4.19 (Wildlife hazards) of Chapter 4 (Western Sydney Aerotropolis) of the Western Parkland City SEPP applies to development of land within the 13 kilometre wildlife buffer zone. Relevant developments cannot be granted development consent within this area unless consultation has occurred with the relevant Commonwealth body responsible for Airport operation, and the DA is supported by a written assessment of the wildlife likely to be present on the land and the risk of the wildlife to the operation of the Airport. Relevant development means development for the following purposes; agricultural produce industries, aquaculture, camping grounds, eco-tourist centres, garden centres, intensive livestock agriculture, intensive plant agriculture, livestock processing industries, plant nurseries, recreation facilities (major), recreation facilities (outdoor), sewage treatment plants, water or resource management facilities that consist of outdoor processing, storage or handling of organic or putrescible waste, and water storage facilities. Any such relevant developments within the Master Plan area will be required to undertake these requirements prior to development consent. However, such assessments are currently beyond the scope of this current report.

Preservation of trees and vegetation

Section 4.25 (Preservation of trees and vegetation) applies to land in the Environment and Recreation Zone as well as land shown as "high biodiversity value" on the High Biodiversity Value Areas Map. No such lands occur within the development footprint of the Master Plan, and as such this section does not apply.

6.7.9 *Western Sydney Aerotropolis Development Control Plan 2022 Phase 2*

The following tables provide an assessment of the Master Plan against the performance outcomes and benchmark solutions detailed in the Phase 2 DCP for the following environmental values:

- Deep soil and tree canopy (**Table 11**)
- Protection of biodiversity (**Table 12**)
- Protection of trees and vegetation (**Table 13**)
- On lot and streetscape landscaping and preferred plant species (**Table 14**)

Table 11 Deep soil and tree canopy performance outcomes included under the Phase 2 DCP

ID	Performance outcome	Benchmark solution	Master Plan
PO1	Consolidate areas of deep soil and tree canopy and provide minimum dimensions which allow for sufficient tree planting.	1. Tree canopy and deep soil is provided in accordance with Table 2 (of the DCP). Applicants must also have regard for the site coverage and relevant pervious surface targets outlined in this DCP. 2. Deep soil areas are to be a minimum 3m by 3m in dimension. 3. Consolidate deep soil areas by establishing these areas right up to abutting boundary walls and fence lines. 4. Consolidate deep soil in setback areas and locate with adjoining deep soil areas in adjoining properties. 5. Other than Urban Parks available under the Aerotropolis Precinct Plan, a minimum tree canopy of 45 % for open space is to be achieved. Where open spaces include sports courts or fields, the 45 % tree canopy shall be provided outside the spaces identified for the court or field area. 6. Deep soil planting areas are to be de-compacted before planting with no	The Master Plan allows for areas of deep soil with adequate dimensions sufficient for tree planting. The minimum soil areas and widths for tree planting included are: • Large Trees – 10 m x 10 m or equivalent • Medium Trees – 6 m x 6 m or equivalent • Small trees – 3.5 m x 3.5m or equivalent Where planter areas abut boundary walls and fence lines a minimum of 6 m width is required.

ID	Performance outcome	Benchmark solution	Master Plan
		services to be installed within these zones.	

Table 12 Protection of biodiversity performance outcomes included under the Phase 2 DCP

ID	Performance outcome	Benchmark solution	Master Plan
PO2	Populations of targeted threatened species are retained, and the condition of suitable habitat improves within areas of the Cumberland subregion most likely to support long-term viability.	1. Mitigation to be undertaken in accordance with the following best practice guidelines for threatened ecological communities (TEC): a. *Best Practice Guidelines: Cooks River/Castlereagh Ironbark Forest* (NSW Department of Environment and Climate Change, 2008) within and adjacent to the TEC; and b. *Recovering Bushland on the Cumberland Plain: Best Practice Guidelines for the Management and Restoration of Bushland* (NSW Department of Environment and Climate Change, 2005). 2. Fencing is to be constructed where required to protect threatened species habitat. Site design allows public access to fencing for ongoing maintenance. 3. Temporary protective fencing to be erected around areas identified for conservation on or immediately adjoining the site prior to construction commencing. 4. Allow public access to temporary fencing to ensure ongoing maintenance throughout construction. 5. Protect integrity of temporary fencing during construction. 6. Implement open structure design for roads adjacent to known populations of Cumberland Plain Land Snail in accordance with actions under the Save	Mitigation measures will be undertaken in accordance with the best practice guidelines for TECs. The site design has been considered to allow public access to fencing for ongoing maintenance. The remaining mitigation measures will be implemented during construction works.

ID	Performance outcome	Benchmark solution	Master Plan
		our Species Program (EES, 2020). 7. Locate Asset Protection Zones (APZs) for bushfire protection wholly within certified land. The appropriate APZ distance is determined by Planning for Bush Fire Protection 2019 and Rural Fire Service Standards for Asset Protection based on vegetation type, slope and development type. 8. Contain domestic cats and dogs within certified-urban capable land, consistent with relevant council guidelines as permitted and appropriate. 9. Provide for the reuse of native plants (including but not limited to seed collection) and topsoil from development sites that contain known or potential native seed bank.	
PO3	Development facilitates the connected movement of native animals through the landscape.	1. Avoid impacts to habitat features which provide essential habitat for native fauna including ground cover and shrub layers, emerging trees, mature trees, dead trees capable of providing habitat, natural drainage lines and rock outcrops and avoid impacts to soil within the Tree Protection Zone (TPZ) of the retained trees and the subject and neighbouring sites. 2. Movement of fauna is facilitated within and through wildlife corridors by: a. Ensuring that development, services and landscaping associated activities do not create barriers to the movement of fauna along and within wildlife corridors; and b. Protect fauna from potential hazards during pre-construction and construction. c. Prepare a pre-clearance native fauna survey immediately prior to clearing of native vegetation to ensure that arboreal	Detailed assessment to be provided at DA stage.

ID	Performance outcome	Benchmark solution	Master Plan
		mammals, roosting and hollow-using birds, bats and reptiles are stopped from accessing any vegetation to be cleared and are translocated prior to clearing. Translocation may require a licence from NSW Environment, Energy and Science under the Translocation Operational Policy d. Adopt and implement open structure design for roads adjacent to known populations of the Cumberland Plain Land Snail in accordance with actions under the NSW Government's *Saving Our Species* program.	
PO4	Within land subject to the *Cumberland Plain Conservation Plan* only, development adjoining conservation areas provides ecological setbacks to threatened species.	1. The following threatened species require setbacks: Grey-headed Flying-fox: i. Grey-headed Flying-fox camp requires 100 m setback to any buildings and development; ii. The setback area should be maintained free of flying fox roosting habitat; and iii. A Flying-fox management plan should be provided to demonstrate management and mitigation measures. Raptors: i. Raptor nests require a 500m circular setback from where nests are in extensive undisturbed bushland; and ii. Where nests are located closer to existing developments, a minimum circular setback distance of 250 m should be maintained along with an undisturbed corridor at least 100m wide extending from the nest to the nearest foraging grounds.	No Grey-headed Flying-fox camps or raptor nests were detected within the study area during the field assessments. As such these setbacks are not relevant to the Master Plan. Should these features become established within the Master Plan area then they will need to be considered at the DA stage.
PO5	Noise and light adjacent, and near,	1. High intensity lighting including industrial or commercial lighting, sports field lighting, lighting within carparking	There is a risk that needs to be balanced in achieving this control in the future, greening Bradfield City

ID	Performance outcome	Benchmark solution	Master Plan
	conservation areas does not result in any disturbance to wildlife.	areas and associated with any industrial or commercial-scale retail development shall be designed to avoid light spill into adjoining parks and biodiversity areas (AS 4282 Control of the Obtrusive Effects Of Outdoor Lighting, or updates to that standard, are to be considered as a minimum). 2. Install warm coloured LED street lighting where a development footprint contains or is within 100 m of known microbat colonies or habitat likely to support microbat colonies to deter insects. 3. Manage light spill and noise producing activities where wildlife impacts are likely to arise from the proposed development and where development is adjacent to avoided land. Measures shall include appropriate noise treatment barriers along major roads and other light and noise attenuation mitigation measures. 4. Ensure that any residual noise impacts on wildlife arising from development are appropriately mitigated.	Centre whilst also designing a safe area with adequate lighting, sightlines and passive surveillance. This control needs to be reviewed in association with Design for Safe Places PO4 when being implemented, particularly in relation to the mixed-use and residential area located in the south-west of Bradfield City Centre which currently requires pedestrians to cross through an open space with few direct connections over Thompsons Creek to Rapid Bus and Metro services.
PO6	Bushfire risk is minimised.	1. Ensure appropriate fire management regimes and hazard reduction techniques for native vegetation areas, waterways, and riparian zones.	Fire management regimes and hazard reduction will be implemented as per the Bushfire Strategy and Impact Assessment which has been included as part of the Master Plan Application.
PO7	Retain and protect koala populations and their habitats through mitigating indirect and ongoing impacts from development.	2. For all certified-urban capable land adjacent to koala habitat, the following controls apply: a. Design subdivision layout, including perimeter roads and asset protection zones to reduce impacts to, and protect areas of, adjacent koala habitat. b. Signpost areas adjoining koala habitat to identify koalas in the area and associated penalties for non-compliance.	If required, the Master Plan will address certified-urban capable land requirements where relevant.

ID	Performance outcome	Benchmark solution	Master Plan
		c. Exclude planting tree species in open space, recreation areas and urban streets that are koala feed tree species set out below by Schedule 2 – Central and Southern Tablelands and Central Coast Koala Use Tree Species of the State Environmental Planning Policy (Koala Habitat Protection) 2021. d. An ecologist shall be present through the duration of any pre-clearance koala surveys and vegetation clearing works to maintain oversight and responsibility of the activities and koala translocation. 3. Where a koala exclusion fence is not installed between koala habitat and certified-urban capable land, the following development controls apply: a. Prepare a pre-clearance koala survey immediately prior to the removal of native vegetation to ensure minimal disturbance to koala habitat. Implement a translocation plan if koalas are found. Translocation may require a licence from NSW Environment, Energy and Science (EES) under the Translocation Operational Policy. b. Implement a tree-felling protocol to avoid impacts to koalas in trees to be cleared. c. Enforce vehicle wash-down points for machinery, equipment and tyres prior to entering and leaving the construction site to control the spread of vegetation pathogens known to affect koala feed trees. Pre-construction Temporary Fencing d. Erect temporary protective fencing designed for koala protection to protect adjacent koala habitat on or immediately adjoining the site prior to construction to ensure koala	

ID	Performance outcome	Benchmark solution	Master Plan
		protection. Dog Containment Fencing e. Design and construct public dog recreation areas with secure containment fencing. f. Design residential lots with dog containment fencing in accordance with Council requirements. Development Operation g. Manage roadside vegetation to increase the visibility of koalas. Vehicle Strike h. Implement traffic calming measures for all development i. Implement 40km/hr speed limit restrictions on local roads adjacent to koala habitat. ii. Install koala information signposts on perimeter roads and roads adjacent to wildlife habitat areas in accordance with Austroads, Roads and Maritime Services (RMS) technical guidelines, Council Guidelines and relevant Australian Standards. iii. Install traffic calming devices such as speed humps and audible surfacing along perimeter roads adjacent to koala habitat. iv. Install koala-friendly road design structures, such as underpasses, fauna bridges and overpasses as required. Reference to the RMS Biodiversity Guidelines is to be made.	

Table 13 Protection of trees and vegetation performance outcomes included under the Phase 2 DCP

ID	Performance outcome	Benchmark solution	Master Plan
PO1	Existing trees and vegetation are retained, protected, enhanced, and incorporated into the development, wherever possible.	1. Development is designed to minimise impacts on trees, except for invasive species and/or noxious weeds. Note: Applications involving the removal of trees must refer to the Liverpool Council Tree Management Policy or the Penrith Council Guidance for Tree Removal and pruning available on the respective Council's website	The Master Plan aims to retain the majority of existing trees where appropriate within planned public open space. Retention of trees will be confirmed during the detailed DA design.
PO2	Minimise threats to the long-term survival of existing trees through tree preservation zones and pruning techniques.	1. Works and construction activities are excluded within the Tree Protection Zone (TPZ) of trees unless a qualified arborist has assessed the tree and provided guidelines as to how the work can be carried out with minimal risk to the long-term survival of the tree and this has been included in an approved Tree Protection Plan (Drawing and Specification). 2. Any pruning or tree removal works that may impact threatened ecological communities are to adhere to the following best practice guidelines: a. Best Practice Guidelines: Cooks River/Castlereagh Ironbark Forest (Department of Environment and Climate Change NSW, 2008) within and adjacent to the threatened ecological community; and b. Recovering Bushland on the Cumberland Plain: Best Practice Guidelines for the Management and Restoration of Bushland (Department of Environment and Climate Change NSW, 2005). 3. Development is designed to avoid impacts on trees, except for priority weeds in accordance with the Council's weed policy.	It is assumed TPZ and mitigation measures including pre-clearance will be undertaken prior to clearance and development. These would be included as conditions of consent following lodgement of a DA.

ID	Performance outcome	Benchmark solution	Master Plan
		4. Existing trees have appropriate soil volumes and setbacks from buildings, footpath, road/kerb and gutter and services to provide sufficient space for root and canopy development to ensure the tree reaches its identified mature height and spread.	
PO3	Where hollow-bearing trees cannot be retained and are removed, they shall be replaced with nesting boxes, as close as possible to where the removed tree was located.	1. The removal of the hollow bearing trees shall be offset by the installation of nesting boxes. The size of the nest box is to reflect the size and dimensions of the hollow removed. Alternatively, the tree hollow could be appropriately mounted on one of the retained trees in a manner where it will not pose a risk to life or property. 2. All nesting boxes and hollows shall be mounted at least 5 m above the ground. 3. Requirement for 60% of nest boxes (replacement habitat) to be in place prior to clearing of hollow-bearing trees.	To be considered and addressed at detailed DA design.

Table 14 Preferred plant species performance outcomes detailed in the Phase 2 DCP

ID	Performance outcome	Benchmark solution	Master Plan
PO1	Plant species are provided in accordance with the preferred species identified for the Aerotropolis	1. Landscaping in development is to incorporate a diverse range plant species, as per the Aerotropolis DCP preferred Species List provided at Appendix B of this DCP. Prioritise use of Cumberland species, followed by other species that are suitable for the purpose and the microclimatic conditions of the site.	Plant species selected within the landscape guideline and masterplan will be generally selected from Appendix B of the Phase 2 DCP. Plant species that are not part of DCP will require an ecologist to sign off to ensure that the non-DCP plant species conform to the Phase 2 DCP's species selection principles. To be confirmed as part of detailed DA design.
PO2	Landscape design reflects the cultural landscape	1. Landscaping is to highlight architectural features, define entry points, indicate direction, and frame	A holistic approach has been undertaken to ensure the most effective landscape design solution

ID	Performance outcome	Benchmark solution	Master Plan
	and is integrated with the design intent of the architecture and built form.	and filter views into the site along sight lines. 5. Size and scale of landscaping is responsive to the bulk and scale of the development.	has been achieved. Additional details to be confirmed as part of detailed DA design.
PO3	Landscaping complements the views to and from the public domain, as well as to and from public and private open spaces within the site.	1. Use appropriate species to screen side (where sufficient width permits) and rear boundaries and enhance visually obtrusive land uses or building elements (e.g., waste enclosures).	To be confirmed as part of detailed DA design.
PO4	Trees are planted in locations and distances apart to support their ongoing growth without causing conflict, including with the Obstacle Limitation Surface and utility services.	1. Trees are planted in unobstructed spaces where they have a minimum of three mature trunk diameter space to grow, and to limit upheaval of pavements and infrastructure. 2. Trees are not to penetrate operational airspace and tree heights should encourage wildlife movements below the OLS, where practical. 3. Demonstrate species have been selected to ensure that at maturity, heights and root systems will achieve adequate clearance from streetlights and underground services such as stormwater pits. 4. If required, trees can be planted in underground engineered tree pits to provide sufficient underground space to sustain the tree to maturity and beyond. 5. Trees are planted and spaced to ensure the locations are spacings permit the trees to establish and reach maturity with their canopy and trunk being unimpeded.	1. Where trees are located close to paving or in limited areas of soft landscaping, stratacell or equivalent is required to ensure successful root growth can be achieved and to reduce damage to hardscape elements. 2. Landscaping should be planned, so to not to attract wildlife that could create a safety hazard to the operations of the Western Sydney International Airport. Refer to Appendix B of the Phase 2 DCP for a list of suitable landscape species. In areas within the 3 km wildlife buffer but outside of the priority/ parkland, a report prepared by a suitability qualified and experienced ecologist is to be submitted with any application when the landscaping plan: a. Incorporates alternative landscape species not listed within Appendix B. b. Incorporates landscape species denoted within the landscape species list. c. Will result in more than 5 trees being planted in 1 group (group refers to touching mature canopies).

ID	Performance outcome	Benchmark solution	Master Plan
			d. Provides a spacing between a group of 5 or more. 3, 4 and 5. To be confirmed as part of a detailed DA design.
PO5	Landscaping design promotes safety and surveillance.	1. Within high use areas (e.g. car parking areas, children's play areas and walkways), trees at maturity have clean trunks to a height of 1.8 m around facilities. 2. Medium height shrubs (0.6 m – 1.8 m) are avoided along paths and close to windows and doors to maintain sight lines and allow for passive surveillance. 3. Landscaping in the vicinity of a driveway entrance does not obstruct visibility for the safe ingress and egress of vehicles and pedestrians.	Landscaping design as part of Master Plan agrees with these principles.
PO6	Landscaping is integrated with vehicular access and car parking areas on development lots to soften their visual impact, provide protection from glare, and reduce heat island effect.	1. Provide 1 medium tree for every 5 at grade car spaces, and maximise shading (as listed and shown in the image below) by: a. Orienting the tree parallel to the parking space. b. Staggering the configuration rather than linear. c. Selecting a tree with a Leaf Area Index of >4. d. Using structurally engineered pits or vaults and WSUD design principles to provide appropriate space for tree root development. 2. Landscaping shall not restrict driver sightlines to pedestrians, cyclists, and other vehicles on the frontage road. 3. Where basement car parking extends beyond the building envelope, a minimum soil depth of 1.5m is provided above the basement,	Landscaping design as part of Master Plan agrees with these principles.

ID	Performance outcome	Benchmark solution	Master Plan
		measured from the top of the slab, and including the required drainage. This will not be calculated as part of the deep soil zone nor included as part of the urban typology (site coverage) for the site	

6.7.10 Wildlife Management Assessment Report

Table 15 outlines the performance outcomes and benchmark solutions that have been included in the Phase 2 DCP for Wildlife Hazards and provides an assessment against the Master Plan. As detailed in **Section 4.4.3**, these performance outcomes have been developed in accordance with the wildlife buffers outlined in the WSA Wildlife Management Assessment Report.

Table 15 Wildlife hazard performance outcomes detailed in the Phase 2 DCP

ID	Performance outcome	Benchmark solution	Master Plan
PO1	Development does not attract wildlife which would create a safety hazard to the operations of the Airport.	1. All waste bins are designed and installed with fixed lids. 2. Any bulk waste receptacle or communal waste storage area is contained within enclosures that cannot be accessed by birds or flying foxes. 3. Any stormwater detention within the 3 km and 8 km wildlife buffer is designed to fully drain within 48 hours after a rainfall event. 4. Buildings and structures are designed to minimise the opportunity for roosting areas.	The benchmark solutions identified for PO1 will need to be addressed during the DA process. These are too detailed for the current level of design included under the Master Plan.
PO2	Landscaping does not attract wildlife that could create a safety hazard to the operations of the Airport.	1. Refer to Appendix B for a list of suitable landscape species. 2. In areas within the 3 km wildlife buffer but outside of the priority/parkland areas shown in Figure 15, a report prepared by a suitability qualified and experienced ecologist is to be submitted with any application when the landscaping	Figure 9 (Western Parkland City Vision – Government Commitment Areas map) of the Phase 2 DCP provides an overview of proposed Parkland Priority Areas which includes the following priority areas: • Environment and Recreation Zone. • National Parks and Reserves.

ID	Performance outcome	Benchmark solution	Master Plan
		plan: a. Incorporates alternative landscape species not listed within Appendix B; b. Incorporates landscape species denoted within the landscape species list; c. Will result in more than five trees being planted in 1 group (group refers to touching mature canopies); and/or d. Provides a spacing between a group of 5 or more trees that is less than 100 m. 3. The ecologist report is to consider building, site, and water body design outcomes and/or landscape maintenance measures that will mitigate bird and flying fox attraction and roosting areas.	• Aerotropolis Core and Northern Gateway Mixed Use Zones. • Luddenham Village. As a large majority of the study area is mapped as Mixed Use under the Western Parkland City SEPP, it is included within this priority area. In accordance with the Phase 2 DCP, areas of the Master Plan within this priority area do not require an ecologist report when utilising any of the species listed in Appendix B (Western Sydney Aerotropolis Landscape Species List) of the Phase 2 DCP, including those that have the additional requirements of "*only within 3 km wildlife buffer, where supported by ecologist report, confirming landscape design minimises wildlife attraction*". A small area to the north-west of the study area is zoned as Enterprise under the Western Parkland City SEPP and therefore is not included within the Parkland Priority Area. As this area is within the 3 km wildlife buffer zone, some species will require an ecologist report before they can be planted in this area. It is understood that the Master Plan is only utilising the approved species from Appendix B (Western Sydney Aerotropolis Landscape Species List) of the Phase 2 DCP within this area, and none of the included species have the additional requirement of an ecological report when planted within the 3 km buffer zone.

6.7.11 Western Sydney Aerotropolis Plan

Table 16 outlines the planning principles relevant to biodiversity that are included in the Western Sydney Aerotropolis Plan (i.e., Sustainability Objective 4) along with a summary of how the Master Plan is addressing these planning principles.

Table 16 Sustainability (objective 4) planning principles included in the Western Sydney Aerotropolis Plan

ID	Planning principle	Master Plan
SU1	Retain and enhance natural features such as waterways, vegetation, landform and culturally significant landscapes.	The Master Plan retains natural features such as the Moore Gully and Thompsons Creek watercourses which will be enhanced as part of the proposed plan. Areas of ENV have also been retained through the proposed open space network which includes Ridge Park in the north of the Master Plan site, and a large regional parkland in the southern portion of the Master Plan site. These two parklands cover 30.27 ha (26.33 % of the entire Master Plan site) and will undergo significant rehabilitation in accordance with the Master Plan Open Space Strategy, as detailed in Section 6.6.2.
SU2	Integrate Blue Green Infrastructure links with public open spaces and the Green Grid, maximising opportunities for connections, an urban tree canopy and active use of the floodplain.	The Master Plan preserves the Moore Gully and Thompsons Creek watercourses which will contribute significantly to the blue grid across the Master Plan site. The Master Plan also preserves 30.27 ha of open space through Ridge Park and the large regional parkland to the south of the Master Plan area. In addition to these areas, small pockets of district and local open spaces are provided throughout the main section of the development footprint, ensuring green spaces are available throughout the Bradfield City Centre.
SU3	Retain water in the landscape by maximising appropriate permeable surfaces, reusing water and developing appropriate urban typologies.	The Master Plan incorporates key water management requirements through the rehabilitation of riparian corridors along Moore Gully and Thompsons Creek, as well as through an integrated design approach which incorporates water quality, water reuse and flood detention requirements across the site. A key site for the delivery of these outcomes is the Moore Gully watercourse which will include riparian zones, wetland zones with on-site detention, bioretention treatment, and open water storage (WPCA 2023).
SU4	Orient urban development towards creeks and integrate into the landscape through quality open space, a high degree of solar access and tree canopy.	The interface between the Master Plan development footprint and the Moore Gully precinct has been designed to incorporate promenades which will aid in the transition between developable space and the blue-green grid represented by Moore Gully and the surrounding regional parkland (WPCA 2023). Open space areas including regional parkland, the Ridge Park, Central Park and local open spaces throughout the developable areas ensure quality open space is available through the Master Plan site. As per Section 2.4 (Vegetation and Biodiversity) of the

ID	Planning principle	Master Plan
		Phase 2 DCP, areas set aside for urban parks will require a minimum tree canopy of 40 % to be achieved.
SU5	Develop a connected parkland network linking with the Wianamatta–South Creek corridor that shapes the Aerotropolis and provides amenity and ecological value and create a high quality ridgeline and linear parks adjacent to, and integrated with, riparian corridors that retain water.	Moore Gully and its surrounding regional parkland connect directly with Thompsons Creek which forms part of the Wianamatta – South Creek corridor, allowing for retention of water across the site. This regional parkland will be subject to significant rehabilitation which will increase its ecological value, particularly along its existing degraded riparian corridor. The Ridge Park at the northern end of the Master Plan site will also ensure green open space is available along ridgelines within the Master Plan site.
SU6	Retain and increase the urban tree canopy and green cover across the Aerotropolis consistent with the Region Plan target of 40% and the Premier's Priority for Greening our city.	Open space areas cover 30.27 ha (26.33 %) of the Master Plan site. As per Section 2.4 (Vegetation and Biodiversity) of the Phase 2 DCP, areas set aside for urban parks will require a minimum tree canopy of 40 % to be achieved.
SU7	Retain, enhance and co-locate vegetation on ridgelines with active open space and use it to guide building heights.	ENV located within the northern section of the Master Plan site will be protected and retained through the co-location of the Ridge Park open space in this area. This will ensure native vegetation is retained at the key ridge site as part of the Master Plan.
SU8	Identify and protect scenic and cultural landscapes and develop a street grid based on landforms, with long north–south blocks in urban areas to attain good solar performance, and east–west streets to capture long views to the Blue Mountains.	The Master Plan consists of a grid-based lot arrangement, accommodating long north-south blocks where possible. North-south corridors through the Master plan site are represented by the central major road transit corridor (which will be lined with canopy trees) as well as several other vegetative corridors between lots, the most significant of these being the City Walk West leading south from Central Park and the proposed Metro station. Three arterial east-west streets cross the Master Plan site which will ensure long views are maintained. These streets will also be lined with canopy trees ensuring green corridors are available throughout the city centre. Finally, the City Walk East will connect Central Park and the Metro station with the proposed major events space within the regional parkland to the south-east of the Master Plan site.

ID	Planning principle	Master Plan
SU9	Meet the requirements of the biodiversity conservation program in the Cumberland Plain Conservation Plan and approved strategic biodiversity certification and strategic assessment protecting land with biodiversity value and provide a sensitive urban interface that supports and enhances corridors and reserves.	The Master Plan site occurs within the South West Growth Centre and includes land designated as certified and non-certified under Chapter 3 (Sydney region growth centres) of the Western Parkland City SEPP. The Master Plan conforms with the requirements of this SEPP and its associated bio-certification order, as detailed within Section 6.7.3. The Bradfield City Centre Master Plan site occurs outside of the nominated Western Sydney Aerotropolis area under the Cumberland Plain Conservation Plan.
SU10	Avoid, minimise and mitigate impacts on threatened species and endangered ecological communities, habitat corridors, and riparian and aquatic habitats to prioritise length, connectivity and representativeness to maintain ecological function. Protect the integrity and continuity of wildlife by: • protecting priority habitat corridors to support migrating species, birds and arboreal mammals • using public land for biodiversity conservation with an appropriate management regime. • expanding vegetation corridors if impacted by utility installations.	The Master Plan allows for 30.27 ha of open space as either regional parkland or the Ridge Park. This represents 26.33 % of the total Master Plan area and includes patches of ENV and other areas of native vegetation which include TECs and habitat for threatened species. These areas will be rehabilitated in accordance with the Open Space Strategy detailed in Section 6.6.2, as well as through the requirement of the Phase 2 DCP, which states that these areas will require a minimum tree canopy of 40 % to be achieved. This rehabilitation will ensure the ecological values across the Master Plan site are preserved and enhanced.
SU11	Retain and protect wetland environments to support plant animal communities and to mitigate wildlife attraction or wildlife strike.	Wetland environments will be retained and rehabilitated along the Moore Gully watercourse as part of the proposed Master Plan. These areas will be supported through the preservation of the 40-metre core riparian zone along Moore Gully and Thompsons Creek.
SU12	Provide open space buffers and asset protection zones to conservation areas wholly within urban capable footprints.	Asset Protection Zones (APZs) will be wholly located within the Master Plan development footprint. No encroachment of APZs is proposed into the areas mapped as Open Space as part of the proposed Master Plan.
SU13	Plan stormwater and wastewater in the Wianamatta–South Creek Catchment to minimise potential hydrologic and hydraulic	The Master Plan incorporates key water management requirements through the rehabilitation of riparian corridors along Moore Gully

ID	Planning principle	Master Plan
	impacts on ecology, creek structure, infrastructure, water quality and the natural water cycle. Integrate water sensitive urban design and use stormwater or recycled water to irrigate streets and public open space to support public amenity and urban cooling. Co-locate industrial water users, where appropriate.	and Thompsons Creek, as well as through an integrated design approach which incorporates water quality, water reuse and flood detention requirements across the site. A key site for the delivery of these outcomes is the Moore Gully watercourse which will include riparian zones, wetland zones with on-site detention, bioretention treatment, and open water storage (WPCA 2023).

6.7.12 *Western Sydney Aerotropolis Precinct Plan*

The Master Plan is consistent with the requirements for riparian corridors (Section 4.5.2) and biodiversity and vegetation corridors (Section 4.5.4) detailed in the *Western Sydney Aerotropolis Precinct Plan*. Further assessment against the requirements of the Precinct Plan is provided in the Bradfield City Centre Master Plan Report (WPCA 2023).

7 Recommendations

Recommendations to aid in the avoidance and mitigation of impacts to ecological values as a result of the proposed Master Plan are detailed in Table 17. Also included are offsetting options for unavoidable impacts. These recommendations have been developed based on best practice and apply during future development design phases as well as during future construction works. Further requirements to avoid and minimise impacts to ecological values are likely to be included as part of the development application process for future development within the Master Plan area. Such developments would also need to be undertaken in accordance with the requirements of the Phase 2 DCP.

Table 17 Recommendations to avoid, mitigate, and offset impacts to ecological values

Ref	Recommendation	Timeframe	Responsible
Native vegetation			
1	The Master Plan has avoided impact to 12.47 ha of native vegetation which is included under the plans Open Space Strategy detailed in Section 6.6.2. Further impacts to native vegetation and TECs within the development footprint can be managed by implementing appropriate safeguards in further planning and design stages as part of the DA process. This includes avoiding areas of native vegetation wherever possible, and, where unavoidable, targeting areas of lower condition vegetation for development/impact.	During detailed design of subsequent developments. Part of the DA process.	Development proponent
2	Identifying the locations where the TECs and native vegetation to be retained as No Go zones in a project CEMP or similar.	During construction	Construction contractor
3	Install appropriate exclusion fencing to the boundary of the TECs and any construction areas where there is some potential for accidental encroachment. Include appropriate signage such as No Go Zone or Environmental Protection Area.	During construction	Construction contractor
4	Any development within the study area would need to adhere to performance outcomes outlined in the Phase 2 DCPs. These DCPs include several protections for biodiversity, native vegetation and plant planting that will ensure further impacts to native vegetation are minimised or remediated.	During detailed design of subsequent developments. Part of the DA process.	Development proponent
5	Ensure any modification to the Master Plan during further concept planning or during construction that has	During lifetime of	WPCA

Ref	Recommendation	Timeframe	Responsible
	some potential to impact on the TECs is assessed. This may include tests of significance according to Section 1.7 of the EP&A Act.	Master Plan	
6	Ensure appropriate sediment control measures are put in place to ensure run-off during construction does not result in indirect impacts to native plant communities, particularly TECs.	During construction	Construction contractor
7	Identify opportunities to revegetate impacted areas following development works. Revegetation works would need to follow the approved planting lists outlined in the DCPs and comply with the fauna management and mitigation measures outlined in the Western Sydney Aerotropolis: *Wildlife Management Assessment Report - Final Report Revision 3* (Avisure 2020) and Section 10.2 (Wildlife Hazards) of the Phase 2 DCP.	During detailed design of subsequent developments. Part of the DA process.	Development proponent
8	Impacts to native vegetation in non-certified areas has been avoided under the Master Plan. Should removal of vegetation within these areas be required the removal a biodiversity assessment will be required. As this vegetation is mapped on the Biodiversity Values map, the removal will trigger the BOS and a BDAR will need to be prepared in accordance with the BAM.	During detailed design of subsequent developments. Part of the DA process.	Development proponent
Threatened species			
9	A population of *Marsdenia viridiflora* subsp. *viridiflora*, listed as an endangered population under the BC Act, occurs in the north-directly adjacent to the north-west portion of the study area (Figure 4). Currently the surrounding area is included as part of the Open Space area and will not be impacted. If future works in this area are required then these individuals should be protected through No-Go zones, or options for their relocation should be investigated.	During detailed design of subsequent developments. Part of the DA process.	Development proponent or WPCA
Priority weeds			
10	To prevent biosecurity impacts, in accordance with the NSW Biosecurity Act all practical steps should be taken to control and eradicate priority weeds from future development footprints prior to or during vegetation removal. A pre-clearance assessment may need to be undertaken to identify potential weed material and recommend appropriate treatment or disposal measures.	During construction	Construction contractor

Ref	Recommendation	Timeframe	Responsible
Hollow-bearing trees			
11	Where required, removal of significant habitat trees should be preceded by a preclearance assessment, followed by a two-stage clearing process to minimise impact to native fauna. **Step 1:** Surrounding shrubs and canopy to be removed and the hollow-bearing tree/s to be knocked by arborist or excavator and left standing for 24-48 hours prior to hollow-bearing tree removal, to allow time for fauna to escape and relocate naturally. **Step 2:** Ecologist or arborist (if high in tree) to inspect hollows and/or habitat trees for the presence of fauna. Excavator operator or arborist to again knock or disturb the habitat tree prior to felling, with the intent to encourage the final movement of fauna out of hollows/nests. During felling, the tree is felled as carefully as possible and placed on the ground, for example branch-by-branch to allow for regular checks for fauna by the Ecologist. Lengths cut from trees during felling should be divided in a manner that will preserve integrity of any hollows present and placed in retained vegetation to provide habitat for ground dwelling fauna. Any fauna displaced are either captured and inspected for injury prior to relocation in a pre-allocated area or allowed to self-relocate into adjacent retained habitats. Injured fauna are to be taken to a local veterinarian or a WIRES representative is to be contacted as soon as possible.	During construction	Construction contractor
12	Loss of hollows should be offset through the installation of compensatory habitat such as nest boxes. Nest boxes should be installed in the environmental prior to clearing and offset a minimum of 2:1 ratio (nest boxes: hollows lost) as outlined in the Phase 2 DCP. Any hollows removed should be reserved and installed in nearby environments to provide additional habitat for fauna.	During construction	Construction contractor

Ref	Recommendation	Timeframe	Responsible
13	At least 60 % of replacement habitat (i.e., nest boxes) should be installed prior to the removal of a hollow-bearing trees.	During construction	Construction contractor
Key fish habitat			
14	Wherever possible development should be avoided within the key fish habitat buffers associated with Moore Gully and Thompsons Creek (Figure 6).	During detailed design of subsequent developments. Part of the DA process.	Development proponent
15	Impacts within the 50 m key fish habitat buffer will require liaison with DPI. This may lead to a reduction in buffer width in some instances (in the case of the identified minor encroachments).	During detailed design of subsequent developments. Part of the DA process.	Development proponent or WPCA
16	Impacts to the key fish habitat associated with the transit corridors are likely to require aquatic assessment to support approval (and associated permitting) from DPI under Part 7 of the FM Act. The impacts may require offsets by environmental compensation in accordance with the “no net loss of key fish habitat” policy outlines in Section 3.1 of Fairfull (2013).	During detailed design of subsequent developments. Part of the DA process.	Development proponent or WPCA
17	Offset with compensatory works will only be considered if it can be demonstrated that avoidance is impossible. Section 3.1 of Fairfull (2013) sets out eight principles that should be considered in order to achieve this.	During detailed design of subsequent developments. Part of the DA process.	Development proponent or WPCA
Watercourses and riparian corridors			
18	Works within 40 m from top of bank of any mapped watercourse will require a controlled activity permit from NRAR. Major projects that are classified as State Significant Developments and State Significant Infrastructure are exempt from this requirement.	During detailed design of subsequent developments. Part of the DA process.	Development proponent or WPCA
19	Ensure appropriate sediment control measures are put in place to ensure run-off during construction does not	During construction	Construction contractor

Ref	Recommendation	Timeframe	Responsible
	result in indirect impacts to the watercourse.		
20	Ensure No-Go zones are in place to protect any retained sections of riparian corridors.	During construction	Construction contractor
Farm dams			
21	An aquatic pre-clearance assessment should be undertaken prior to the decommissioning of the four identified farm dams. This assessment should determine presence of native aquatic fauna (fish, turtles and eels) and develop a plan for their relocation during dam decommissioning. The assessment should also identify presence of exotic fish species such as Eastern Gambusia that may need to be managed during dam decommissioning to prevent the species from entering nearby waterways.	During construction	Construction contractor
22	If dams are suspected of containing native aquatic fauna (fish, turtles and ells) a two-stage dam dewatering process should be adopted. **Step 1:** The dam is partially dewatered to target depth and left overnight to allow mobile aquatic fauna such as turtles and eels to self-relocate. Typically, the target depth is a wadeable depth that allows for a safe undertaking of step 2. The target depth should be determined during the dam pre-clearance assessment. **Step 2:** Ecological supervision is required during the final stages of dam dewatering where the remaining water is removed from the dam. Ecologists to undertake fauna salvage and relocation of any remaining fauna individuals as necessary.	During construction	Construction contractor
23	Any modification to farm dams along existing hydro lines is likely to require liaison with DPI Fisheries and/or a controlled activity permit for carrying out activities on waterfront land, as defined under the WM Act.	During detailed design of subsequent developments. Part of the DA process.	Development proponent

8 Conclusion

This report is an assessment of the potential impacts of the proposed Master Plan on ecological values within the Bradfield City Centre. The Plan has been assessed in accordance with the EP&A Act, FM Act, BC Act and EPBC Act, as well as relevant SEPPs and DCPs relating to the Western Sydney Aerotropolis.

The proposed Master Plan development will result in impacts to the following ecological values:

- Removal or 24.60 ha native vegetation which includes areas of potential threatened flora and fauna habitat.
- Removal of 11 hollow-bearing trees within the study area supporting a total of 21 hollows of small (<50 mm diameter) or medium (50 – 149 diameter) size classes.
- Impacts to two sections of Moore Gully and its associated VRZ and key fish habitat buffer, associated with future transit corridors at the eastern and western extent of the study area.
- Minor encroachment into the key fish habitat buffer associated with Thompsons Creek.
- Impacts to five unnamed Strahler order one watercourses, and one unnamed Strahler order two watercourse and their associated VRZs.
- Impact to one farm dam.

All six of the vegetation communities mapped by Biosis within the study area are consistent with TECs listed under the EPBC Act or the BC Act. The majority of vegetation impacts (24.07 hectares or 98 % of all impacts) occurs to PCT 849 Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion, 10.33 hectares of which satisfies the key diagnostic criteria of the EPBC Act listed CEEC *Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest* and all 24.07 hectares satisfies the key diagnostic criteria for the BC Act listed CEEC *Cumberland Plain Woodland in the Sydney Basin Bioregion*.

Following the field investigation, seven threatened flora species and 19 threatened fauna species listed under the EPBC Act or BC Act were identified as having a medium or greater likelihood of occurrence in the study area. One endangered flora population, *Marsdenia viridiflora* subsp. *viridiflora*, listed under the BC Act was also recorded during the field surveys as four individuals, directly adjacent to the study area. This population is not impacted under the proposed Master Plan.

The study area occurs within the South West Growth Centre and direct impact to native vegetation are restricted to areas that have been classified as "certified" under Chapter 3 (Sydney region growth centres) of the Western Sydney Parkland SEPP. Due to the effect of the Growth Centres Biodiversity Certification Order, these areas have previously been granted biodiversity certification under the BC Act and as such no further assessments in the form of tests of significance under the EP&A Act or triggering of the BOS and subsequent assessment under the BAM is required. A BDAR or SIS is not required. In addition, due to the *Sydney Growth Centres Strategic Assessment Program Report* (DECCW 2010) and subsequent endorsement by the Commonwealth Minster for the Environment, certified areas within the South West Growth Centre are also considered to have biodiversity approval under Part 9 of the EPBC Act. As such no referral for impacts to Matters of NES for the proposed Master Plan is required.

Impacts to watercourses, VRZs and key fish habitat buffers will require liaison with DPI Fisheries and NRAR, with future developments impacting of aquatic features likely to require controlled activity permits.

Recommendations to avoid, mitigate and offset the above impacts have been included in Section 7 of this report. These include detailed design recommendations, exclusion fencing and recommendations regarding appropriate vegetation clearing practices, staged habitat removal, supervision of habitat clearance and the installation of replacement habitat (refer to **Table 17** for full details regarding the proposed safeguards).

9 References

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Appendix 1 – Flora

Flora species recorded from the study area

Notes to tables

Status – EPBC Act: CE – Critically Endangered EN – Endangered VU – Vulnerable	**Status – BC Act:** E1 – endangered species (Part 1, Schedule 1) E2 – endangered population (Part 2, Schedule 1) E4 – presumed extinct (Part 4, Schedule 1) E4A – critically endangered V – vulnerable (Part 1, Schedule 2)
Status – Exotic # – Native species outside natural range * – priority weed species declared under the Biosecurity Act	

Table A.1 Flora species recorded from the study area

Scientific name	Common name	Commonwealth status	NSW status
Native species			
Acacia decurrens	Black Wattle		
Acacia implexa	Hickory Wattle		
Alisma plantago-aquatica	Water Plantain		
Alternanthera denticulata	Lesser Joyweed		
Amyema miquelii	Box Mistletoe		
Angophora floribunda	Rough-barked Apple		
Aristida ramosa	Purple Wiregrass		
Aristida vagans	Threeawn Speargrass		
Arthropodium milleflorum	Pale Vanilla-lily		
Arthropodium minus			
Asperula conferta	Common Woodruff		
Austrostipa ramosissima	Stout Bamboo Grass		
Azolla pinnata	Azolla		
Bothriochloa decipiens	Redleg Grass		
Breynia oblongifolia	Coffee Bush		
Brunoniella australis	Blue Trumpet		

Scientific name	Common name	Commonwealth status	NSW status
Bursaria spinosa subsp. *spinosa*	Native Blackthorn		
Carex appressa	Tall Sedge		
Carex inversa	Knob Sedge		
Casuarina glauca	Swamp Oak		
Cayratia clematidea	Native Grape		
Centella asiatica	Indian Pennywort		
Cheilanthes sieberi	Poison Rock Fern		
Cheilanthes sieberi subsp. *sieberi*	Rock Fern		
Chloris ventricosa	Tall Chloris		
Chorizema parviflorum	Eastern Flame Pea		
Chrysocephalum apiculatum	Common Everlasting		
Clematis aristata	Old Man's Beard		
Clematis glycinoides	Headache Vine		
Commelina cyanea	Native Wandering Jew		
Cycnogeton procerum	Water Ribbons		
Cymbonotus lawsonianus	Bear's Ear		
Cymbopogon refractus	Barbed Wire Grass		
Cynodon dactylon	Common Couch		
Cyperus gracilis	Slender Flat-sedge		
Daviesia ulicifolia	Gorse Bitter Pea		
Desmodium gunnii	Slender Tick-trefoil		
Desmodium rhytidophyllum			
Desmodium varians	Slender Tick-trefoil		
Dianella longifolia	Blue Flax-Lily		
Dichelachne micrantha	Shorthair Plumegrass		
Dichondra repens	Kidney Weed		
Digitaria parviflora	Small-flowered Finger Grass		
Dillwynia sieberi			
Dodonaea viscosa subsp. *cuneata*	Sticky Hopbush		
Echinopogon caespitosus var. *caespitosus*	Hedgehog Grass		
Echinopogon ovatus	Forest Hedgehog Grass		
Einadia hastata	Berry Saltbush		
Einadia nutans subsp. *linifolia*	Climbing Saltbush		
Einadia trigonos	Fishweed		

Scientific name	Common name	Commonwealth status	NSW status
Eleocharis acuta			
Eleocharis plana	Flat Spike-sedge		
Eleocharis sphacelata	Tall Spike Rush		
Eleocharis spp.	Spike-rush, Spike-sedge		
Entolasia stricta	Wiry Panic		
Eragrostis brownii	Brown's Lovegrass		
Eremophila debilis	Amulla		
Eucalyptus amplifolia	Cabbage Gum		
Eucalyptus amplifolia subsp. *amplifolia*	Cabbage Gum		
Eucalyptus crebra	Narrow-leaved Ironbark		
Eucalyptus eugenioides	Thin-leaved Stringybark		
Eucalyptus fibrosa	Red Ironbark		
Eucalyptus moluccana	Grey Box		
Eucalyptus tereticornis	Forest Red Gum		
Euchiton involucratus	Star Cudweed		
Euchiton japonicus			
Fimbristylis dichotoma	Common Fringe-sedge		
Geranium solanderi	Native Geranium		
Glycine clandestina	Twining glycine		
Glycine microphylla	Small-leaf Glycine		
Glycine tabacina	Variable Glycine		
Goodenia hederacea	Ivy Goodenia		
Grevillea robusta	Silky Oak		
Grevillea robusta (planted)	Silky Oak		
Hakea dactyloides (planted)	Broad-leaved Hakea		
Indigofera australis	Australian Indigo		
Juncus usitatus			
Kunzea ambigua	Tick Bush		
Lepidosperma laterale			
Lobelia purpurascens	Whiteroot		
Lomandra filiformis subsp. *filiformis*			
Lomandra multiflora subsp. *multiflora*	Many-flowered Mat-rush		
Ludwigia peploides subsp. montevidensis	Water Primrose		

Scientific name	Common name	Commonwealth status	NSW status
Marsdenia viridiflora subsp. *viridiflora*	Native Pear		E2
Marsilea mutica	Nardoo		
Marsilea spp.	A Nardoo		
Melaleuca decora			
Melaleuca nodosa	Prickly-leaved Paperbark		
Mentha diemenica	Slender Mint		
Microlaena stipoides var. *stipoides*	Weeping Grass		
Opercularia diphylla	Stinkweed		
Ottelia ovalifolia	Swamp Lily		
Oxalis perennans			
Ozothamnus diosmifolius	White Dogwood		
Paspalidium distans			
Paspalum distichum	Water Couch		
Persicaria decipiens	Slender Knotweed		
Philydrum lanuginosum	Woolly Frogmouth		
Plantago debilis	Shade Plantain		
Plantago gaudichaudii	Narrow Plantain		
Plectranthus parviflorus	Cockspur flower		
Poa labillardierei var. *labillardierei*	Tussock		
Potamogeton spp.			
Potamogeton tricarinatus			
Ranunculus inundatus	River Buttercup		
Rytidosperma tenuius	A Wallaby Grass		
Senecio quadridentatus	Cotton Fireweed		
Solanum americanum	Glossy Nightshade		
Solanum prinophyllum	Forest Nightshade		
Sporobolus creber	Slender Rat's Tail Grass		
Sporobolus elongatus	Slender Rat's Tail Grass		
Stackhousia monogyna	Creamy Candles		
Themeda triandra			
Tricoryne simplex			
Triglochin procera	Water Ribbons		
Typha orientalis	Cumbungi		

Scientific name	Common name	Commonwealth status	NSW status
Vernonia cinerea			
Veronica plebeia	Trailing Speedwell		
Wahlenbergia communis	Tufted Bluebell		
Wahlenbergia stricta	Tall Bluebell		
Wurmbea dioica	Early Nancy		
Exotic species			
Araujia sericifera	Moth Vine		
Asparagus aethiopicus	Ground Asparagus		*
Asparagus asparagoides	Bridal Creeper		*
Bidens pilosa	Cobbler's Pegs		
Bidens subalternans	Greater Beggar's Ticks		
Brassica spp.	Brassica		
Cenchrus clandestinus	Kikuyu Grass		
Chloris gayana	Rhodes Grass		
Cirsium vulgare	Spear Thistle		
Conyza bonariensis	Flaxleaf Fleabane		
Cotoneaster glaucophyllus	Large-Leaf Cotoneaster		
Cyperus eragrostis	Umbrella Sedge		
Ehrharta erecta	Panic Veldtgrass		
Eichhornia crassipes	Water Hyacinth		*
Eragrostis curvula	African Lovegrass		
Gamochaeta spp.			
Gomphocarpus fruticosus	Narrow-leaved Cotton Bush		
Hypochaeris radicata	Catsear		
Juncus acutus	Spiny Rush		
Lantana camara	Lantana		*
Ligustrum lucidum	Broad-Leaf Privet		
Ligustrum sinense	Narrow-Leaf Privet		
Lycium ferocissimum	African Boxthorn		*
Modiola caroliniana	Red-flowered Mallow		
Ochna serrulata	Mickey Mouse Plant		
Olea europaea subsp. *cuspidata*	African Olive		*
Opuntia ficus-indica	Indian Fig		
Opuntia stricta	Common Prickly Pear		*

Scientific name	Common name	Commonwealth status	NSW status
Oxalis corniculata	Creeping Oxalis		
Paspalum dilatatum	Paspalum		
Phytolacca octandra	Inkweed		
Pinus radiata	Radiata Pine		
Plantago lanceolata	Lamb's Tongues		
Richardia stellaris			
Rubus fruticosus	Blackberry		*
Rumex crispus	Curly Dock		
Senecio madagascariensis	Fireweed		*
Senecio pterophorus			
Senna pendula var. *glabrata*	Cassia		
Setaria pumila	Pale Pigeon Grass		
Sida rhombifolia	Paddy's Lucerne		
Solanum linnaeanum	Apple of Sodom		
Solanum nigrum	Black-berry Nightshade		
Solanum pseudocapsicum	Madeira Winter Cherry		
Solanum seaforthianum	Climbing Nightshade		
Solanum sisymbriifolium			
Soliva sessilis	Bindyi		
Sonchus oleraceus	Common Sowthistle		
Tradescantia fluminensis	Wandering Jew		
Verbena bonariensis	Purpletop		
Verbena officinalis	Common Verbena		

Flora species recorded from the study area

Notes to tables

Status – EPBC Act:	Status – BC Act:
CE – Critically Endangered EN – Endangered VU – Vulnerable	E1 – endangered species (Part 1, Schedule 1) E2 – endangered population (Part 2, Schedule 1) E4 – presumed extinct (Part 4, Schedule 1) E4A – critically endangered V – vulnerable (Part 1, Schedule 2)

Most recent record

- species predicted to occur by the PMST (not recorded on other databases).

- species predicted to occur based on natural distributional range and suitable habitat despite lack of records in the databases searched.
2017 - recorded during current survey.

Examples of criteria for determining the likelihood of occurrence for threatened entities as a guide for writing the rationale for likelihood have been listed below.

Likelihood of occurrence	Potential criteria for likely occurrence in study area
Recorded	• Recorded in the study area during current assessment. • Records in study area, as indicated by background research.
High	• Species/ecological communities recorded in study area during current or previous assessment/s. • Aquatic species recorded from connected waterbodies in close proximity to the study area during current or previous assessment/s. • Sufficient good quality habitat is present in study area or in connected waterbodies in close proximity to the study area (aquatic species). • Study area is within species natural distributional range (if known). • Species has been recorded within five kilometres or from the relevant catchment/basin.
Medium	• Records of terrestrial entities within five kilometres of the study area or of aquatic species in the relevant basin/neighbouring basin. • Habitat limited in its capacity to support the species due to extent, quality, or isolation.
Low	• No records within five kilometres of the study area or for aquatic species, the relevant basin/neighbouring basin. • Marginal habitat present (low quality and extent). • Substantial loss of habitat since any previous record(s).
Negligible	• Habitat not present in study area. • Habitat for aquatic species not present in connected waterbodies in close proximity to the study area. • Habitat present but sufficient targeted survey has been conducted at an optimal time of year and species wasn't recorded.

Table A.2 Threatened flora species recorded / predicted to occur within 5 kilometres of the study area

Scientific name	Common name	Conservation status		Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC				
Acacia bynoeana	Bynoe's Wattle	VU	EN	#	Low	No records for the species within 5 km of the study area. Species was not detected during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	Semi prostrate shrub that grows in a variety of communities including; Southern Tableland Dry Sclerophyll Forests, Sydney Hinterland Dry Sclerophyll Forests, Coastal Valley Grassy Woodlands and Sydney Coastal Heaths. Prefers open, slightly disturbed sites on sandy soils.
Acacia pubescens	Downy Wattle	VU	VU	1999#	Moderate	Species previously recorded approximately 4 km from the study area however no recent records exist. PCTs within the study area match the habitat requirements for the species.	A spreading shrub that grows in Cooks/River Castlereagh Ironbark Forest, Shale/Gravel Transition Forest and Cumberland Plain Woodland, usually within roadside and bushland remnants. Grows on shale, sandstone, alluvium and gravely soils, often including ironstone.
Allocasuarina glareicola		EN	EN	#	Low	No records for the species within 5 km of the study area. Species was not detected during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	Small, depauperate shrub that grows in Castlereagh Woodlands, Cumberland Dry Sclerophyll Forest, Sydney Hinterland Dry Sclerophyll Forest, Sydney Sand Flats Dry Sclerophyll Forests. Grows in lateritic soil.

Scientific name	Common name	Conservation status		Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC				
Cynanchum elegans	White-flowered Wax Plant	EN	EN	#	Low	No records for the species within 5 km of the study area. Species was not detected during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	Climbing vine that grows in rainforest gully scrub and scree slope on the edge of dry rainforests in a variety of communities including Coastal Floodplain Wetlands, Maritime Grasslands, Coastal Valley Grassy Woodlands and Northern Hinterland Wet Sclerophyll Forests.
Dillwynia tenuifolia			VU	2019	Moderate	Species previously recorded approximately 4 km from the study area. PCTs within the study area match the habitat requirements for the species.	Low, spreading shrub that grows in scrubby or heathy areas within a variety of communities including Castlereagh Ironbark Forest, Shale Gravel Transition Forest, Castlereagh Scribbly Gum Woodland and Sydney Hinterland Dry Sclerophyll Forests. Grows on tertiary alluvium, laterised clays and in shale-sandstone transitions.
Genoplesium baueri	Bauer's Midge Orchid	EN	EN	#	Negligible	No species records within 5 km of the study area. PCTs present within the study area are not associated with the species (DPIE 2022).	Terrestrial orchid with 13 populations totalling 200 plants. Grows on moss gardens in a variety of communities including Sydney Coastal Dry sclerophyll Forests, Sydney Coastal Heaths, Sydney Montane Heaths, Southern Lowland Wet Sclerophyll Forests and Sydney Hinterland Dry Sclerophyll Forests. Grows on sandstone substrates
Grevillea juniperina	Juniper-leaved		VU	2020	Moderate	Closest record is approximately 6 km north-	Spreading to erect medium sized shrub that grows at elevations <50 m in Cumberland

Scientific name	Common name	Conservation status		Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC				
subsp. *juniperina*	Grevillea					east of the study area. PCTs within the study area match the habitat requirements for the species.	Plain Woodland, Castlereagh Ironbark Forest, Castlereagh Scribbly Gum Woodland, Shale/Gravel Transition Forest, Sydney Sand Flats Dry Sclerophyll Forests and Coastal Valley Grassy Woodlands. Grows in sandy to clay loam soils and red pseudolateritic gravels derived from Wianamatta Shale and Tertiary Alluvium.
Grevillea parviflora subsp. *parviflora*	Small-flower Grevillea	VU	VU	2018#	Moderate	Closest record is approximately 6 km north-east of the study area. PCTs within the study area match the habitat requirements for the species.	Low spreading to erect shrub that grows in Shale Sandstone Transition Forest, Kurri Sand Swamp Woodland, Corymbia maculata - Angophora costata Open Forest in the Dooralong Area, Sydney Sandstone Ridgetop Woodland at Wedderburn and Cooks River/Castlereagh Ironbark Forest at Kemps Creek. Grows in sandy or light clay soils including tertiary alluviums over thin shales and lateritic ironstone gravels.
Haloragis exalata subsp. *exalata*	Square Raspwort	VU	VU	#	Low	No records for the species within 5 km of the study area. Species was not detected during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	Small to medium sized shrub that grows in damp, protected and shaded areas in riparian zones in a variety of communities including South East Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Montane Bogs and Fens and Northern Warm Temperate Rainforests.

Scientific name	Common name	Conservation status		Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC				
Macadamia integrifolia	Macadamia Nut	VU		2018	Negligible	Species is not known to occur naturally in the wild in NSW. Records in the locality are likely to be related to planted individuals or garden escapees.	Medium sized tree that occurs in the Northern Rivers region of NSW in remnant rainforest, mixed notophyll forest and rainforest margins.
Marsdenia viridiflora subsp. *viridiflora*	Native Pear		E2	2019	Recorded	Species detected in study area during survey (Biosis 2020, 2021a).	Slender climber with twining stems that grows in vine thickets and open shale woodland in a variety of communities including Cumberland Dry Sclerophyll Forests, Coastal Floodplains Wetlands, Coastal Valley Grassy Woodlands and Dry Rainforests.
Persicaria elatior	Tall Knotweed	VU	VU	#	Low	No records for the species within 5 km of the study area. Species was not detected during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	Erect herb that grows in damp places usually on the margins of waterbodies and in swamp forests in a variety of communities including Coastal Floodplain Wetlands, Coastal Swamp Forests, Eastern Riverine Forests, Coastal Freshwater Lagoons and Coastal Heath Swamps.
Persoonia hirsuta	Hairy Geebung	EN	EN	#	Low	No records for the species within 5 km of the study area. Species was not detected during field	Spreading, hairy shrub that grows at elevations between 350 - 600 metres in a variety of communities including Southern Tableland Dry Sclerophyll Forests, Sydney

Scientific name	Common name	Conservation status		Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC				
						investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	Hinterland Dry Sclerophyll Forests, Western Slopes Dry Sclerophyll Forests, Coastal Valley Grassy Woodlands, Sydney Coastal Heaths and Southern Escarpment Wet Sclerophyll Forests. Grows in sandy soils on sandstone substrates.
Persoonia nutans	Nodding Geebung	EN	EN	2018#	Moderate	Closest record is approximately 5 km north-east of the study area. PCTs within the study area match the habitat requirements for the species.	Erect or spreading shrub that grows in Cumberland Dry Sclerophyll Forests including Agnes Banks Woodland, Castlereagh Scribbly Gum Woodland, Cooks River/Castlereagh Ironbark Forest and Shale-Sandstone Transition Forest as well as Sydney Sand Flats Dry Sclerophyll Forests and Coastal Valley Grassy Woodlands. Grows in sandy soils derived from aeolian or alluvial sediments as well as in tertiary alluviums to the south of its range.
Pimelea spicata	Spiked Rice-flower	EN	EN	2017#	Moderate	Closest record is approximately 4 km north-west of the study area within the footprint Western Sydney International Airport. PCTs within the study area match the habitat requirements for the species.	Small erect or spreading shrub that grows in Maritime Grasslands and Coastal Valley Grassy Woodlands including Cumberland Plain Woodlands and Moist Shale Woodlands within the Cumberland Basin and in Coast Banksia Open Woodland Coastal Grasslands in the Illawarra region. Grows on well-structured clay soils.

Scientific name	Common name	Conservation status		Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC				
Pomaderris brunnea	Brown Pomaderris	VU	EN	#	Low	No records for the species within 5 km of the study area. Species was not detected during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	Medium sized shrub that grows on floodplains and creeklines in a variety of communities including Sydney Hinterland Dry Sclerophyll Forests, Central Gorge Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Coastal Valley Grasslands and North Coast Wet Sclerophyll Forests. Grows in clay and alluvial soils.
Pterostylis saxicola	Sydney Plains Greenhood	EN	EN	#	Low	No records for the species within 5 km of the study area. Species was not detected during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	Deciduous terrestrial orchid that grows near streams in depression on sandstone rock shelves above cliff lines faces, moist, sheltered ridges and creek banks on mossy rocks in Temperate Montane Grasslands, Northern Warm Temperate Rainforests, Southern Warm Temperate Rainforests and Southern Tableland Wet Sclerophyll Forests. Grows in small pockets of shallow shale or shale/sandstone transition soils over sandstone substrates.
Pultenaea parviflora		VU	EN	1999#	Low	Closest record occurs 4 km to the north-east of the study area and was recorded in 1999. Several closer records exist approximately 3.5 km to the north-west (recorded in 1996 and 1999). These occur within the footprint	Small erect, branching shrub found growing in Cumberland Dry Sclerophyll Forests including Castlereagh Ironbark Forest, Shale Gravel Transition Forest and Castlereagh Scribbly Gum Woodland, Sydney Coastal Dry Sclerophyll Forests, Sydney Sand Flats Dry Sclerophyll Forests, Coastal Valley Grassy Woodlands and Southern Lowland Wet Sclerophyll Forests. Grows in soils derived

Scientific name	Common name	Conservation status EPBC	Conservation status BC	Most recent record	Likely occurrence in study area	Rationale	Habitat description
						of the Western Sydney International Airport and are likely no longer present following significant earthworks in this area. Species was not detected during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	from Wianamatta shale, laterite or alluvium.
Syzygium paniculatum	Magenta Lilly Pilly	VU	EN	1977#	Negligible	No recent records for the species within 5 km. PCTs present within the study area are not associated with the species (DPIE 2022). Species was not detected during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	Small to medium sized rainforest tree found growing on stabilized dunes near the sea in South Coast Sands Dry Sclerophyll Forests, Coastal Swamp Forests, Coastal Headland Heaths, Littoral Rainforests, Northern Hinterland Wet Sclerophyll Forests and Southern Lowland Wet Sclerophyll Forests. Grows on grey sandy, gravelly, silty or clay soils over sandstone substrates.
Thelymitra kangaloonica	Kangaloon Sun Orchid	CR	CR	#	Negligible	No records for the species within 5 km. PCTs present within the study area are not associated with the species (DPIE 2022). Species was not detected	Terrestrial orchid found growing in swamps and sedgelands at elevations between 550 and 700 metres in Temperate Highland Peat Swamps on Sandstone, Coastal Heath Swamps and Montane Bogs and Fens. A cryptic species which is most visible when

Scientific name	Common name	Conservation status		Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC				
						during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	flowering between late October and early November. Grows in grey silty or grey loam soils.
Thesium australe	Austral Toadflax	VU	VU	#	Low	No records for the species within 5 km. Species was not detected during field investigations however targeted survey was not undertaken (Biosis 2020, 2021a).	Small, straggling herb. A root parasite found growing on damp sites in grassland, grassy woodlands and coastal headlands often in association with Kangaroo Grass Themeda triandra in a variety of communities including New England Dry Sclerophyll Forests, Western Slopes Grasslands, Northern Tableland Wet Sclerophyll Forests, Brigalow Clay Plain Woodlands, Subalpine Woodlands and Maritime Grasslands.

Appendix 2 – Fauna

Flora species recorded from the study area

Notes to tables

Status – EPBC Act: CE – Critically Endangered EN – Endangered VU – Vulnerable	**Status – BC Act:** E1 – endangered species (Part 1, Schedule 1) E2 – endangered population (Part 2, Schedule 1) E4 – presumed extinct (Part 4, Schedule 1) E4A – critically endangered V – vulnerable (Part 1, Schedule 2)
Status – FM Act: C1 – critically endangered E1 – endangered E2 – endangered E4 – presumed extinct V1 – vulnerable	**Status – Non-indigenous species** * pest species not native to the area

Table A.3 Vertebrate fauna species recorded from the study area (current assessment)

Scientific name	Common name	Commonwealth status	NSW status
Birds			
Cracticus tibicen	Australian Magpie		
Corvus coronoides	Australian Raven		
Threskiornis moluccus	Australian White Ibis		
Chenonetta jubata	Australian Wood Duck		
Coracina novaehollandiae	Black-faced Cuckoo-shrike		
Anas castanea	Chestnut Teal		
Acridotheres tristis	Common Myna		
Sturnus vulgaris	Common Starling		
Ocyphaps lophotes	Crested Pigeon		
Gallinula tenebrosa	Dusky Moorhen		
Platycercus eximius	Eastern Rosella		
Turdus merula	Eurasian Blackbird		
Fulica atra	Eurasian Coot		
Eolophus roseicapilla	Galah		
Great Egret	Great Egret		
Rhipidura albiscapa	Grey Fantail		

Scientific name	Common name	Commonwealth status	NSW status
Dacelo novaeguineae	Laughing Kookaburra		
Grallina cyanoleuca	Magpie-lark		
Vanellus miles	Masked Lapwing		
Falco cenchroides	Nankeen Kestrel		
Manorina melanocephala	Noisy Miner		
Anas superciliosa	Pacific Black Duck		
Porphyrio porphyrio	Purple Swamphen		
Anthochaera carunculata	Red Wattlebird		
Neochmia temporalis	Red-browed Finch		
Psephotus haematonotus	Red-rumped Parrot		
Myzomela sanguinolenta	Scarlet Honeyeater		
Malurus cyaneus	Superb Fairy-wren		
Egretta novaehollandiae	White-faced Heron		
Rhipidura leucophrys	Willie Wagtail		
Mammals			
Macropus giganteus	Eastern Grey Kangaroo		
Oryctolagus cuniculus	Rabbit	*	*
Trichosurus vulpecula	Common Brushtail Possum		
Vulpes vulpes	Fox	*	*
Wallabia bicolor	Swamp Wallaby		
Frogs			
Crinia signifera	Common Eastern Froglet		
Limnodynastes tasmaniensis	Spotted Grass Frog		

Fauna species recorded from the study area

Notes to tables

Status – EPBC Act:	Status – BC Act:
CE – Critically Endangered EN – Endangered VU – Vulnerable	E1 – endangered species (Part 1, Schedule 1) E2 – endangered population (Part 2, Schedule 1) E4 – presumed extinct (Part 4, Schedule 1) E4A – critically endangered V – vulnerable (Part 1, Schedule 2)

Most recent record

- species predicted to occur by the PMST (not recorded on other databases).

- species predicted to occur based on natural distributional range and suitable habitat despite lack of records in the databases searched.
2017 - recorded during current survey.

Examples of criteria for determining the likelihood of occurrence for threatened entities as a guide for writing the rationale for likelihood have been listed below.

Likelihood of occurrence	Potential criteria for likely occurrence in study area
Recorded	• Recorded in the study area during current assessment. • Records in study area, as indicated by background research.
High	• Species/ecological communities recorded in study area during current or previous assessment/s. • Aquatic species recorded from connected waterbodies in close proximity to the study area during current or previous assessment/s. • Sufficient good quality habitat is present in study area or in connected waterbodies in close proximity to the study area (aquatic species). • Study area is within species natural distributional range (if known). • Species has been recorded within five kilometres or from the relevant catchment/basin.
Medium	• Records of terrestrial entities within five kilometres of the study area or of aquatic species in the relevant basin/neighbouring basin. • Habitat limited in its capacity to support the species due to extent, quality, or isolation.
Low	• No records within five kilometres of the study area or for aquatic species, the relevant basin/neighbouring basin. • Marginal habitat present (low quality and extent). • Substantial loss of habitat since any previous record(s).
Negligible	• Habitat not present in study area. • Habitat for aquatic species not present in connected waterbodies in close proximity to the study area. • Habitat present but sufficient targeted survey has been conducted at an optimal time of year and species wasn't recorded.

Table A.4 Threatened fauna species recorded, or predicted to occur, within 5 kilometres of the study area

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
Mammals								
Chalinolobus dwyeri	Large-eared Pied Bat	VU	VU	-	2008#	Transient / nomadic	No breeding habitat (caves, karsts, mining shafts, etc.) or known roosting sites occur within the study are or immediate surrounds. Species may forage in the study area but is highly mobile and not considered resident.	Primarily found in dry sclerophyll forests and woodlands, but also found in rainforest fringes and subalpine woodlands. Forages on small, flying insects below the forest canopy. Roosts in colonies of between three and 80 in caves, Fairy Martin nests and mines, and beneath rock overhangs, but usually less than 10 individuals. Likely that it hibernates during the cooler months. The only known existing maternity roost is in a sandstone cave near Coonabarabran.
Dasyurus maculatus maculatus (SE mainland population)	Spotted-tail Quoll	EN		-	#	Low	No records within 5 km. Study area occurs in a peri-urban environment, already fragmented by major roads. The species require large, relatively intact home ranges which is unlikely to be provided by the study area.	Uses a range of habitats including sclerophyll forests and woodlands, coastal heathlands and rainforests. Occasional sightings have been made in open country, grazing lands, rocky outcrops and other treeless areas. Habitat requirements include suitable den sites, including hollow logs, rock crevices and caves, an abundance of food and an area of intact vegetation in which to forage. Seventy per cent of the diet is medium-sized mammals, and also feeds on invertebrates, reptiles and birds. Individuals require large areas of relatively intact vegetation through

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
								which to forage. The home range of a female is between 180 and 1000 ha, while males have larger home ranges of between 2000 and 5000 ha. Breeding occurs from May to August.
Falsistrellus tasmaniensis	Eastern False Pipistrelle		VU	-	2010	Medium	Species has been recorded within 5 km of the study area. Hollow-bearing trees in the study area may provide roosting habitat for the species. Species may also utilise the study area for foraging.	Prefers wet high-altitude sclerophyll and coastal mallee habitat, preferring wet forests with a dense understorey but being found in open forests at lower altitudes. Apparently hibernates in winter. Roosts in tree hollows and sometimes in buildings in colonies of between 3 and 80 individuals. Often change roosts every night. Forages for beetles, bugs and moths below or near the canopy in forests with an open structure, or along trails. Has a large foraging range, up to 136 ha. Records show movements of up to 12 km between roosting and foraging sites.
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat		VU	-	2019	Medium	Species has been recorded within 5 km of the study area. Hollow-bearing trees in the study area may provide roosting habitat for the species. Species may also utilise the study area for foraging.	Most records are from dry eucalypt forests and woodland. Individuals tend to forage in natural and artificial openings in forests, although it has also been caught foraging low over a rocky river within rainforest and wet sclerophyll forest habitats. The species generally roosts in hollow spouts of large mature eucalypts (including paddock trees), although individuals have been recorded roosting in the roof of a hut, in wall cavities,

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
								and under metal caps of telegraph poles. Foraging generally occurs within a few kilometres of roosting sites.
Miniopterus australis	Little Bent-winged Bat		VU	-	2017	Transient / nomadic	No breeding habitat (caves, karsts, mining shafts, etc.) or known roosting sites occur within the study are or immediate surrounds. Species may forage in the study area but is highly mobile and not considered resident.	Roost sites encompass a range of structures including caves, tunnels and stormwater drains. Young are raised by the females in large maternity colonies in caves in summer. Shows a preference for well-timbered areas including rainforest, wet and dry sclerophyll forests, Melaleuca swamps and coastal forests. The Little Bent-wing bat forages for small insects (such as moths, wasps and ants) beneath the canopy of densely vegetated habitats.
Miniopterus orianae oceanensis	Large Bent-winged Bat		VU	-	2017	Transient / nomadic	No breeding habitat (caves, karsts, mining shafts, etc.) or known roosting sites occur within the study are or immediate surrounds. Species may forage in the study area but is highly mobile and not considered resident.	Forms large maternity roosts (up to 100,000 individuals) in caves and mines in spring and summer. Individuals may fly several hundred kilometres to their wintering sites, where they roost in caves, culverts, buildings, and bridges. They occur in a broad range of habitats including rainforest, wet and dry sclerophyll forest, paperbark forest and open grasslands. Has a fast, direct flight and forages for flying insects (particularly moths) above the tree canopy and along waterways.

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
Myotis macropus	Southern Myotis		VU	-	2019	Medium	Species has been recorded within 5 km of the study area. Hollow-bearing trees in the study area may provide roosting habitat for the species. Species may also utilise the study area for foraging.	Roosts in caves, mines or tunnels, under bridges, in buildings, tree hollows, and even in dense foliage. Colonies occur close to water bodies, ranging from rainforest streams to large lakes and reservoirs. They catch aquatic insects and small fish with their large hind claws, and also catch flying insects.
Petauroides volans	Greater Glider	VU		-	2018#	Medium	Species has been recorded within 5 km of the study area. Eucalyptus feed trees within the study area may be utilised as foraging resources. Hollow-bearing trees represent potential breeding habitat. Poor connectivity with other remnant vegetation patches across the landscape limits usage for the species.	Greater Gliders inhabit a variety of eucalypt forests and woodlands. Presence and density of Greater Gliders is related to soil fertility, eucalypt tree species, disturbance history and density of suitable tree hollows. Feeds exclusively on eucalypt leaves, buds, flowers and mistletoe.
Petrogale penicillata	Brush-tailed Rock-wallaby	VU	EN	-	#	Negligible	Areas with ledges, caves and crevices preferred by the	Habitats range from rainforest to open woodland. It is found in areas with numerous ledges, caves and crevices particularly with

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							species are absent from the study area.	northern aspects. The species forages on grasses and forbs.
Phascolarctos cinereus	Koala	EN	VU	-	2018#	Medium	Species has been recorded within 5 km of the study area. Eucalyptus feed trees within the study area may be utilised as foraging resources. Poor connectivity with other remnant vegetation patches across the landscape limits usage for the species.	Koalas feed almost exclusively on eucalypt foliage, and their preferences vary regionally. 65 feed tree species are identified for the Central Coast Koala Management Area which includes the study area. Numerous species are considered primary feed trees *include Eucalyptus robusta*, *E. tereticornis, E. punctata, E. haemastoma* and *E. signata*. Koalas are solitary with varying home ranges.
Pseudomys novaehollandiae	New Holland Mouse	VU		-	#	Negligible	Species has not been recorded within the study area or surrounding locality. Closest record is approximately 20 km to the east in a substantial patch of native vegetation surrounding the Holsworthy (Military) Airport. No records of the species occur within any	Across the species' range the New Holland Mouse is known to inhabit open heathlands, open woodlands with a heathland understorey, and vegetated sand dunes. The home range of the New Holland Mouse can range from 0.44 ha to 1.4 ha. The New Holland Mouse is a social animal, living predominantly in burrows shared with other individuals. The species is nocturnal and omnivorous, feeding on seeds, insects, leaves, flowers and fungi, and is therefore likely to play an important role in seed dispersal and fungal spore dispersal. It is

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							urbanised areas of the Cumberland Plain.	likely that the species spends considerable time foraging above-ground for food, predisposing it to predation by native predators and introduced species. Breeding typically occurs between August and January, but can extend into autumn.
Pteropus poliocephalus	Grey-headed Flying-fox	VU	VU	-	2019#	Transient / nomadic	No camps for the species occur within the study area or immediate locality. The closest known camp is located approximately 13 kilometres to the south-east at Macquarie Fields. Species may utilise the study area for foraging habitat but is not considered resident.	This species is a canopy-feeding frugivore and nectarivore of rainforests, open forests, woodlands, melaleuca swamps and banksia woodlands. Roosts in large colonies, commonly in dense riparian vegetation.
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat		VU	-	2017	Medium	Species has been recorded within 5 km of the study area. Hollow-bearing trees in the study area may provide roosting habitat for the species. Species may also utilise the study	Habitats include wet and dry sclerophyll forest, open woodland, acacia shrubland, mallee, grasslands and desert. They roost in tree hollows in colonies and have also been observed roosting in animal burrows, abandoned Sugar Glider nests, cracks in dry clay, hanging from buildings and under slabs of rock. Forages for insects above the canopy

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							area for foraging.	in forests.
Scoteanax rueppellii	Greater Broad-nosed Bat		VU	-	2017	Medium	Species has been recorded within 5 km of the study area. Hollow-bearing trees in the study area may provide roosting habitat for the species. Species may also utilise the study area for foraging.	Occurs in woodland and rainforest, preferring open habitats or openings in wetter forests. Often hunts along creeks or river corridors. Preys upon beetles and other large, flying insects, other bats and spiders. Roosts in hollow tree trunks and branches.
Birds								
Anthochaera phrygia	Regent Honeyeater	CR	CR	-	#	Transient / nomadic	No records for the species occur within the study area or surrounding locality. Habitat critical to the survival of the species is included in the species' national recovery plan (Commonwealth of Australia 2016). These areas are also included in the BAM – Important Area Maps. The closest important area for the	Regent Honeyeaters are semi-nomadic, occurring in temperate eucalypt woodlands and open forests. Most records are from box-ironbark eucalypt forest associations and wet lowland coastal forests. Nectar and fruit from mistletoes are also eaten. This species usually nest in tall mature eucalypts and sheoaks.

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							species is approximately 39 km to the south-west, associated with the Nattai and Yerranderie conservation areas. There is a low probability that the species will utilise the study area for foraging, however it is not considered resident.	
Artamus cyanopterus cyanopterus	Dusky Woodswallow		VU	-	2019	Medium	Species has been recorded within 5 km of the study area. Habitats within the study area represent potential foraging and roosting habitat.	Primarily inhabits dry, open eucalypt forests and woodlands, including mallee associations, with an open or sparse understorey of eucalypt saplings, acacias and other shrubs, and ground-cover of grasses or sedges and fallen woody debris. It has also been recorded in shrublands, heathlands and very occasionally in moist forest or rainforest. Also found in farmland, usually at the edges of forest or woodland.
Botaurus poiciloptilus	Australasian Bittern	EN	EN	-	2010#	Medium	Species has been recorded within 5 km of the study area. Wetland vegetation within the study area represents	Often found in terrestrial and estuarine wetlands, generally where there is permanent water with tall, dense vegetation including *Typha* spp. and *Eleoacharis* spp.. Typically, this bird forages at night on frogs, fish and invertebrates, and remains

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							potential habitat.	inconspicuous during the day. The breeding season extends from October to January with nests being built amongst dense vegetation on a flattened platform of reeds.
Calidris ferruginea	Curlew Sandpiper	CR	EN	-	#	Negligible	Species has not been recorded within the locality. Species is associated with intertidal areas as well as swamps, lagoons and lakes. Habitat for the species does not occur within the study area.	Inhabits sheltered intertidal mudflats. Also non-tidal swamps, lagoons and lakes near the coast. Infrequently recorded inland.
Callocephalon fimbriatum	Gang-gang Cockatoo	EN	VU	-	2018	Medium	Species has been recorded within 5 km of the study area. Hollow-bearing trees in the study area may provide roosting habitat for the species. Species may also utilise the study area for foraging.	In summer, occupies tall montane forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. Also occur in subalpine Snow Gum woodland and occasionally in temperate or regenerating forest. In winter, occurs at lower altitudes in drier, more open eucalypt forests and woodlands, particularly in box-ironbark assemblages, or in dry forest in coastal areas. It requires tree hollows in which to breed.
Chthonicola	Speckled		VU	-	2013	Medium	Species has been recorded within 5 km of	Found in eucalypt and cypress woodlands with a grassy understorey, often on ridges or

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
sagittata	Warbler						the study area. Habitats within the study area represent potential foraging and roosting habitat.	gullies. The species nests on the ground in grass tussocks, dense litter and fallen branches. They forage on the ground for arthropods and seeds.
Circus assimilis	Spotted Harrier		VU	-	2017	Transient / nomadic	Species has been recorded within 5 km of the study area. Habitats within the study area represent marginal foraging habitat. Species typically inhabits drier inland areas.	The Spotted Harrier is found throughout Australia but rarely in densely forested and wooded habitat of the escarpment and coast. Preferred habitat consists of open and wooded country with grassland nearby for hunting. Habitat types include open grasslands, acacia and mallee remnants, spinifex, open shrublands, saltbush, very open woodlands, crops and similar low vegetation. The Spotted Harrier is more common in drier inland areas, nomadic part migratory and dispersive, with movements linked to the abundance of prey species. Nesting occurs in open or remnant woodland and unlike other harriers, the Spotted Harrier nests in trees.
Daphoenositta chrysoptera	Varied Sittella		VU	-	2015	Medium	Species has been recorded within 5 km of the study area. Habitats within the study area represent potential foraging and	The Varied Sittella is a sedentary species which inhabits a wide variety of dry eucalypt forests and woodlands, usually with either shrubby understorey or grassy ground cover or both, in all climatic zones of Australia. Usually inhabit areas with rough-barked trees, such as stringybarks or ironbarks, but

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							roosting habitat.	also in mallee and acacia woodlands, paperbarks or mature Eucalypts. The Varied Sittella feeds on arthropods gleaned from bark, small branches and twigs. It builds a cup-shaped nest of plant fibres and cobweb in an upright tree fork high in the living tree canopy, and often re-uses the same fork or tree in successive years.
Glossopsitta pusilla	Little Lorikeet		VU	-	2017	Medium	Species has been recorded within 5 km of the study area. Hollow-bearing trees in the study area may provide roosting habitat for the species. Species may also utilise the study area for foraging.	Mostly occur in dry, open eucalypt forests and woodlands. They feed primarily on nectar and pollen in the tree canopy. Nest hollows are located at heights of between 2 m and 15 m, mostly in living, smooth-barked eucalypts. Most breeding records come from the western slopes.
Grantiella picta	Painted Honeyeater	VU	VU	-	#	Transient / nomadic	Species has not been recorded in the locality. Almost all breeding occurs on the inland slopes of the Great Dividing Range in NSW, Victoria and southern Queensland (DPIE 2022). Species may utilise the study area for foraging but is	Found mainly in dry open woodlands and forests, where it is strongly associated with mistletoe. Often found on plains with scattered eucalypts and remnant trees on farmlands.

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							highly mobile and not considered resident.	
Haliaeetus leucogaster	White-bellied Sea-Eagle		VU	-	2019	Transient / nomadic	Species has been recorded within 5 km of the study area. Species builds large stick nests for breeding and is highly selective in its nesting locations. No large stick nests that would indicate presence of a breeding pair of the species were found within the study area. Species may utilise the study area for foraging but is highly mobile not considered resident.	A migratory species that is generally sedentary in Australia, although immature individuals and some adults are dispersive. Found in terrestrial and coastal wetlands; favouring deep freshwater swamps, lakes and reservoirs; shallow coastal lagoons and saltmarshes. It hunts over open terrestrial habitats. Feeds on birds, reptiles, fish, mammals, crustaceans and carrion. Roosts and makes nest in trees.
Hieraaetus morphnoides	Little Eagle		VU	-	2019	Moderate	Species has been recorded within 5 km of the study area. Species builds large stick nests for breeding and is highly selective in its nesting locations. No large stick nests that would indicate	The Little Eagle is most abundant in lightly timbered areas with open areas nearby providing an abundance of prey species. It has often been recorded foraging in grasslands, crops, treeless dune fields, and recently logged areas. The Little Eagle nests in tall living trees within farmland, woodland and forests.

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							presence of a breeding pair of the species were found within the study area. Species may utilise the study area for foraging.	
Hirundapus caudacutus	White-throated Needletail	VU		-	2010#	Transient/ nomadic	Species has been recorded within 5 km of the study area. Species breeds overseas. Species may utilise the study area for foraging habitat but is highly mobile and not considered resident.	An aerial species found in feeding concentrations over cities, hilltops and timbered ranges. Breeds in Asia.
Ixobrychus flavicollis	Black Bittern		VU	-	2000	Low	No recent species records within the locality. Wetland within the study area may provide foraging habitat for the species but is not considered optimal habitat. Species is considered primarily a vagrant to NSW (DPIE 2022).	It inhabits terrestrial and estuarine wetlands such as flooded grasslands, forests, woodlands, rainforests and mangroves with permanent water and dense waterside vegetation. The Black Bittern typically roosts on the ground or in trees during the day and forages at night on frogs, reptiles, fish and invertebrates. The breeding season extends from December to March. Nests are constructed of reeds and sticks in branches overhanging the water.

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
Lathamus discolor	Swift Parrot	CR	EN	-	2019#	Transient / nomadic	Species has been recorded within 5 km of the study area. BAM Important Area Maps for the species identify an area of critical habitat approximately 3 km south-west of the study area however no such areas occur within the study area. The species may utilise the study area for foraging however these habitats are not considered to be preferred by the species.	The Swift Parrot occurs in woodlands and forests of NSW from May to August, where it feeds on eucalypt nectar, pollen and associated insects. The Swift Parrot is dependent on flowering resources across a wide range of habitats in its wintering grounds in NSW. Favoured feed trees include winter flowering species such as Swamp Mahogany *Eucalyptus robusta*, Spotted Gum *Corymbia maculata*, Red Bloodwood *C. gummifera*, Mugga Ironbark *E. sideroxylon*, and White Box *E. albens*. Commonly used lerp infested trees include Grey Box *E. microcarpa*, Grey Box *E. moluccana* and Blackbutt *E. pilularis*. This species is migratory, breeding in Tasmania and also nomadic, moving about in response to changing food availability.
Lophoictinia isura	Square-tailed Kite		VU	-	2019	Moderate	Species has been recorded within 5 km of the study area. Species builds large stick nests for breeding and is highly selective in its nesting locations. No large stick nests that would indicate presence of a breeding pair of the species were found within the study	Typically inhabits coastal forested and wooded lands of tropical and temperate Australia. In NSW it is often associated with ridge and gully forests dominated by *Eucalyptus longifolia*, *Corymbia maculata*, *E. elata*, or *E. smithii*. Individuals appear to occupy large hunting ranges of more than 100 km2. They require large living trees for breeding, particularly near water with surrounding woodland /forest close by for foraging habitat. Nest sites are generally located along or near watercourses, in a tree

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							area. Species may utilise the study area for foraging.	fork or on large horizontal limbs.
Melanodryas cucullata cucullata	Hooded Robin (south-eastern form)		VU	-	1990	Low	No recent records for the species within the locality. Whilst species has a wide distribution it is seldom found in coastal areas (DPIE 2022). Species is unlikely to occur within the study area.	This species lives in a wide range of temperate woodland habitats, and a range of woodlands and shrublands in semi-arid areas.
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)		VU	-	2013	Medium	Species has been recorded within 5 km of the study area. Habitats within the study area represent potential foraging and roosting habitat.	Found mostly in open forests and woodlands dominated by box and ironbark eucalypts.
Neophema pulchella	Turquoise Parrot		VU	-	2010	Medium	Species has been recorded within 5 km of the study area. Hollow-bearing trees in the study area may provide roosting habitat for the species. Species may	Occurs in open woodlands and eucalypt forests with a ground cover of grasses and understorey of low shrubs. Generally found in the foothills of the Great Divide, including steep rocky ridges and gullies. Nest in hollow-bearing trees, either dead or alive; also in hollows in tree stumps. Prefer to

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							also utilise the study area for foraging.	breed in open grassy forests and woodlands, and gullies that are moist.
Numenius madagascariensis	Eastern Curlew	CR		-	#	Negligible	Species has not been recorded within the locality. Species is typically found in intertidal habitats and estuaries. Habitat for the species is not present within the study area.	Occurs in sheltered coasts, especially estuaries, embayments, harbours, inlets and coastal lagoons with large intertidal mudflats or sandflats often with beds of seagrass.
Pandion cristatus	Eastern Osprey		VU	-	#	Negligible	Species has not been recorded within the locality. Species is typically found in intertidal habitats and estuaries. The species builds distinctive nests which were not detected within the study area. Habitat for the species is not present within the study area.	Found in coastal waters, inlets, estuaries and offshore islands. Occasionally found 100 km inland along larger rivers. It is water-dependent, hunting for fish in clear, open water. The Osprey occurs in terrestrial wetlands, coastal lands and offshore islands. It is a predominantly coastal species, generally using marine cliffs as nesting and roosting sites. Nests can also be made high up in dead trees or in dead crowns of live trees, usually within one kilometre of the sea.
Petroica boodang	Scarlet Robin		VU	-	2012	Medium	Species has been recorded within 5 km of	The Scarlet Robin inhabits dry eucalypt forests and woodlands. The understorey is

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							the study area. The species preferred habitat of dry eucalypt forests and woodlands with open and grassy understorey is present within the study area.	usually open and grassy with few scattered shrubs. During autumn and winter it moves to more open and cleared areas. The Scarlet Robin forages amongst logs and woody debris for insects. The nest is an open cup of plant fibres and cobwebs, sited in the fork of a tree.
Petroica phoenicea	Flame Robin		VU	-	2004	Transient / nomadic	Species has been recorded within 5 km of the study area, however record is over 15 years old. Breeding habitat for the species is typically in tall moist eucalypt forests and woodlands, located on ridges and slopes which are not present within the study area. May utilise the study area as foraging habitat but the highly mobile species is not considered resident.	Flame Robins are found in a broad coastal band from southern Queensland to just west of the South Australian border. The preferred habitat in summer includes moist eucalyptus forests and open woodlands, in winter prefers open woodlands and farmlands. It is considered migratory. Diet consists mainly of invertebrates.
Rostratula australis	Australian Painted Snipe	EN	EN	-	#	Low	No records for the species within 5 km of the study area. Wetland and farm dam habitats	Usually found in shallow inland wetlands including farm dams, lakes, rice crops, swamps and waterlogged grassland. They prefer freshwater wetlands but have been

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							present within the study area are considered to be marginal habitat for the species.	recorded in brackish waters. Forages on mud-flats and in shallow water. Feeds on worms, molluscs, insects and some plant-matter.
Stictonetta naevosa	Freckled Duck		VU	-	2018	Low	Species has been recorded within the locality, however the wetland and farm dam habitats present within the study area are considered to be marginal habitat only. Permanent fresh swamps or open lakes preferred by the species are not present.	The Freckled Duck breeds in permanent fresh swamps that are heavily vegetated. Found in fresh or salty permanent open lakes, especially during drought. Often seen in groups on fallen trees and sand spits.
Frogs								
Heleioporus australiacus	Giant Burrowing Frog	VU	VU	-	#	Low	Species has not been recorded in the locality. Preferred habitat of hanging swamp on sandstone shelves are no present in the study area. Sandy creek	Prefers hanging swamps on sandstone shelves adjacent to perennial non-flooding creeks. Can also occur within shale outcrops within sandstone formations. Known from wet and dry forests and montane woodland in the southern part range. Individuals can be found around sandy creek banks or foraging along

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
							banks and ridge-tops are also absent.	ridge-tops during or directly after heavy rain. Males often call from burrows located in sandy banks next to water. Spends the majority of its time in non-breeding habitat 20-250m from breeding sites.
Litoria aurea	Green and Golden Bell Frog	VU	EN	-	#	Low	No records within 5 km of the study area. Closest record is located approximately 7 km north-west of the study area in Luddenham. Significant barriers to dispersal exist between the nearest record and the study area due to the peri-urban nature of the landscape.	Most existing locations for the species occur as small, coastal, or near coastal populations. The species is found in marshes, dams and stream sides, particularly those containing bullrushes or spikerushes. Preferred habitat contains water bodies that are unshaded, are free of predatory fish, have a grassy area nearby and have diurnal sheltering sites nearby such as vegetation or rocks, although the species has also been recorded from highly disturbed areas including disused industrial sites, brick pits, landfill areas and cleared land. Breeding usually occurs in summer. Tadpoles, which take approximately 10-12 weeks to develop, feed on algae and other vegetative matter. Adults eat insects as well as other frogs, including juveniles of their own species.
Fish								
Macquaria	Macquarie	EN		EN	#	Negligible	No records for the species occur within	Macquarie perch are found in both river and lake habitats, especially the upper reaches of

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
australasica	Perch						the locality. Riverine and lake habitats required by the species do not occur within the study area. Mapped habitat for the species on the Fisheries NSW Spatial Data Portal (DPI 2023) do not occur in the study area. Species was not detected during fish surveys conducted along Moore Gully within the study area (Biosis 2021b).	rivers and their tributaries
Prototroctes maraena	Australian Grayling	VU		EN	#	Negligible	No records for the species occur within the locality. Mapped habitat for the species on the Fisheries NSW Spatial Data Portal (DPI 2023) do not occur in the study area. Species was not detected during fish surveys conducted along Moore Gully within the study area (Biosis 2021b).	Grayling is a diadromous species; migrating between freshwater streams and the ocean. This species has been found in clear, gravel-bottomed streams with alternating pools and riffles, and granite outcrops, and also in muddy-bottomed, heavily silted habitats.

Scientific name	Common name	Conservation status			Most recent record	Likely occurrence in study area	Rationale	Habitat description
		EPBC	BC	FM				
Gastropods								
Meridolum corneovirens	Cumberland Plain Land Snail		EN	-	2021	High	Species has been previously recorded within the locality (Eco Logical Australia 2020)..	Most likely restricted to Cumberland Plain, Castlereagh Woodlands and boundaries between River-flat Forest and Cumberland Plain Woodland. It is normally found beneath logs, debris and amongst accumulated leaf and bark particularly at the base of trees. May also use soil cracks for refuge.
Insects								
Synemon plana	Golden Sun Moth	CR	EN	-	#	Negligible	No records for the species occur within the locality. Habitat does not occur on site. Outside of species distribution.	Occurs in Natural Temperate Grasslands and grassy Box-Gum Woodlands, with ground layer dominated by wallaby grasses of the genus Austrodanthonia.

* - habitat descriptions have been adapted by qualified ecologists from the DEE Species Profile and Threats (SPRAT) Database, OEH Threatened Species online profiles and the NSW Scientific Committee final determinations for listed species, references within the above table are provided within the report reference list.

Migratory species (EPBC Act listed)

The following table includes a list of migratory species that have potential to occur within the study area. The list is based on database searches outlined in Section 5.1.

Notes to tables:

Most recent record
species predicted to occur by the PMST (not recorded on other databases).

Table A.5 Migratory fauna species recorded or predicted to occur within 5 kilometres of the study area

Scientific name	Common name	Most recent record
Actitis hypoleucos	Common Sandpiper	#
Apus pacificus	Fork-tailed Swift	#
Ardea ibis	Cattle Egret	2010
Calidris acuminata	Sharp-tailed Sandpiper	#
Calidris ferruginea	Curlew Sandpiper	#
Calidris melanotos	Pectoral Sandpiper	#
Gallinago hardwickii	Latham's Snipe	2017#
Haliaeetus leucogaster	White-bellied Sea-Eagle	2018
Hirundapus caudacutus	White-throated Needletail	2010#
Merops ornatus	Rainbow Bee-eater	2008
Motacilla flava	Yellow Wagtail	#
Numenius madagascariensis	Eastern Curlew	#
Plegadis falcinellus	Glossy Ibis	2010
Tringa nebularia	Common Greenshank	#

Appendix 3 – Protected Matters Search Tool Output

Australian Government

Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 19-May-2023

- Summary
- Details
  - Matters of NES
  - Other Matters Protected by the EPBC Act
  - Extra Information
- Caveat
- Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	8
Listed Threatened Species:	51
Listed Migratory Species:	16

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	39
Commonwealth Heritage Places:	None
Listed Marine Species:	22
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	16
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion	Endangered	Community likely to occur within area	In feature area
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occur within area	In buffer area only
Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion	Critically Endangered	Community likely to occur within area	In feature area
Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest	Critically Endangered	Community likely to occur within area	In feature area
Elderslie Banksia Scrub Forest in the Sydney Basin Bioregion	Critically Endangered	Community may occur within area	In buffer area only
River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria	Critically Endangered	Community likely to occur within area	In feature area
Shale Sandstone Transition Forest of the Sydney Basin Bioregion	Critically Endangered	Community may occur within area	In buffer area only
Western Sydney Dry Rainforest and Moist Woodland on Shale	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia			
Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat may occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat likely to occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Melanodryas cucullata cucullata			
South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat likely to occur within area	In feature area
Neophema chrysostoma			
Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area	In feature area
Numenius madagascariensis			
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pycnoptilus floccosus			
Pilotbird [525]	Vulnerable	Species or species habitat may occur within area	In feature area
Rostratula australis			
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata			
Diamond Firetail [59398]	Vulnerable	Species or species habitat likely to occur within area	In feature area
FISH			
Macquaria australasica			
Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area	In feature area
Prototroctes maraena			
Australian Grayling [26179]	Vulnerable	Species or species habitat may occur within area	In feature area
FROG			
Heleioporus australiacus			
Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Litoria aurea			
Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat likely to occur within area	In feature area
MAMMAL			
Chalinolobus dwyeri			
Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Dasyurus maculatus maculatus (SE mainland population)			
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area	In feature area
Petauroides volans			
Greater Glider (southern and central) [254]	Endangered	Species or species habitat may occur within area	In feature area
Petaurus australis australis			
Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petrogale penicillata			
Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
Pseudomys novaehollandiae			
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pteropus poliocephalus			
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
PLANT			
Acacia bynoeana			
Bynoe's Wattle, Tiny Wattle [8575]	Vulnerable	Species or species habitat may occur within area	In feature area
Acacia pubescens			
Downy Wattle, Hairy Stemmed Wattle [18800]	Vulnerable	Species or species habitat known to occur within area	In feature area
Allocasuarina glareicola			
[21932]	Endangered	Species or species habitat likely to occur within area	In feature area
Cynanchum elegans			
White-flowered Wax Plant [12533]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Genoplesium baueri Yellow Gnat-orchid, Bauer's Midge Orchid, Brittle Midge Orchid [7528]	Endangered	Species or species habitat may occur within area	In feature area
Grevillea parviflora subsp. parviflora Small-flower Grevillea [64910]	Vulnerable	Species or species habitat known to occur within area	In feature area
Haloragis exalata subsp. exalata Wingless Raspwort, Square Raspwort [24636]	Vulnerable	Species or species habitat may occur within area	In feature area
Melaleuca deanei Deane's Melaleuca [5818]	Vulnerable	Species or species habitat may occur within area	In feature area
Persicaria elatior Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat may occur within area	In feature area
Persoonia nutans Nodding Geebung [18119]	Endangered	Species or species habitat known to occur within area	In feature area
Pimelea curviflora var. curviflora [4182]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pimelea spicata Spiked Rice-flower [20834]	Endangered	Species or species habitat likely to occur within area	In feature area
Pomaderris brunnea Rufous Pomaderris, Brown Pomaderris [16845]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pterostylis saxicola Sydney Plains Greenhood [64537]	Endangered	Species or species habitat likely to occur within area	In feature area
Pultenaea parviflora [19380]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rhizanthella slateri Eastern Underground Orchid [11768]	Endangered	Species or species habitat may occur within area	In feature area
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Syzygium paniculatum Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]	Vulnerable	Species or species habitat may occur within area	In feature area
Thelymitra kangaloonica Kangaloon Sun Orchid [81861]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area	In feature area
REPTILE			
Delma impar Striped Legless Lizard, Striped Snake-lizard [1649]	Vulnerable	Species or species habitat may occur within area	In feature area

Listed Migratory Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area	In buffer area only
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
Communications, Information Technology and the Arts - Telstra Corporation Limited		
Commonwealth Land - Australian Telecommunications Commission [12486]	NSW	In feature area
Commonwealth Land - Overseas Telecommunications Commission (Australia) [13339]	NSW	In feature area
Defence		
Defence - BRINGELLY RADIO RECEIVING STATION [10187]	NSW	In buffer area only
Defence - BRINGELLY RADIO RECEIVING STATION [10186]	NSW	In feature area
Defence - BRINGELLY RADIO RECEIVING STATION [10185]	NSW	In feature area
Defence - BRINGELLY RADIO RECEIVING STATION [10184]	NSW	In feature area
Defence - BRINGELLY RADIO RECEIVING STATION [10183]	NSW	In feature area
Defence - BRINGELLY RADIO RECEIVING STATION [10182]	NSW	In feature area
Defence - BRINGELLY RADIO RECEIVING STATION [10189]	NSW	In feature area
Defence - BRINGELLY RADIO RECEIVING STATION [10181]	NSW	In feature area
Defence - BRINGELLY RADIO RECEIVING STATION [10180]	NSW	In feature area
Defence - BRINGELLY RADIO RECEIVING STATION [10188]	NSW	In buffer area only
Defence - BRINGELLY RADIO RECEIVING STATION [10179]	NSW	In feature area
Defence - BRINGELLY RADIO RECEIVING STATION [10190]	NSW	In feature area
Unknown		
Commonwealth Land - [15419]	NSW	In buffer area only

Commonwealth Land Name	State	Buffer Status
Commonwealth Land - [15661]	NSW	In buffer area only
Commonwealth Land - [15662]	NSW	In buffer area only
Commonwealth Land - [12480]	NSW	In buffer area only
Commonwealth Land - [12481]	NSW	In buffer area only
Commonwealth Land - [12482]	NSW	In buffer area only
Commonwealth Land - [12483]	NSW	In buffer area only
Commonwealth Land - [12484]	NSW	In buffer area only
Commonwealth Land - [12485]	NSW	In buffer area only
Commonwealth Land - [13336]	NSW	In buffer area only
Commonwealth Land - [15653]	NSW	In buffer area only
Commonwealth Land - [13335]	NSW	In buffer area only
Commonwealth Land - [12479]	NSW	In buffer area only
Commonwealth Land - [13337]	NSW	In buffer area only
Commonwealth Land - [13334]	NSW	In buffer area only
Commonwealth Land - [15909]	NSW	In buffer area only
Commonwealth Land - [13338]	NSW	In buffer area only
Commonwealth Land - [13103]	NSW	In buffer area only
Commonwealth Land - [13102]	NSW	In buffer area only
Commonwealth Land - [14104]	NSW	In buffer area only
Commonwealth Land - [14105]	NSW	In buffer area only
Commonwealth Land - [14100]	NSW	In buffer area only
Commonwealth Land - [14101]	NSW	In buffer area only
Commonwealth Land - [14102]	NSW	In buffer area only
Commonwealth Land - [14103]	NSW	In buffer area only

Listed Marine Species

[Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Symposiachrus trivirgatus as Monarcha trivirgatus			
Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area	In buffer area only
Tringa nebularia			
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Kemps Creek	Nature Reserve	NSW	In buffer area only

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Construction and Operation of Western Sydney Airport, Badgerys Creek, NSW	2014/7391	Controlled Action	Post-Approval	In buffer area only
Lyn Parade Extension	2004/1392	Controlled Action	Post-Approval	In buffer area only
M12 Motorway Project, Luddenham, NSW	2018/8286	Controlled Action	Post-Approval	In buffer area only
Sydney Metro, Western Sydney Airport - St Marys to Elizabeth Drive	2020/8687	Controlled Action	Post-Approval	In buffer area only
The Northern Road upgrade - Mersey Rd, Bringelly to Glenmore Parkway, Glenmore Park, NSW	2016/7696	Controlled Action	Post-Approval	In buffer area only
Warragamba Dam Raising Project	2017/7940	Controlled Action	Assessment Approach	In buffer area only
Not controlled action				
Clearance of 6.3ha of Cumberland Plain Woodland for industrial subdivision cnr of Old Walgrove and W	2004/1445	Not Controlled Action	Completed	In buffer area only
Electricty Substation at Old Wallgrove Road	2005/2220	Not Controlled Action	Completed	In buffer area only
gas main installation from Eastern Creek to Erskine Park	2005/2235	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Greenway Park Stage 3 residential subdivision	2004/1622	Not Controlled Action	Completed	In feature area
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Shale quarry and materials recovery facility	2008/4661	Not Controlled Action	Completed	In buffer area only
Wonderland Business Park Precinct, Stage 1, Lot D1	2004/1626	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Replacement of flows with recycled water	2006/3050	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only

Bioregional Assessments			
SubRegion	BioRegion	Website	Buffer Status
Sydney	Sydney Basin	BA website	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

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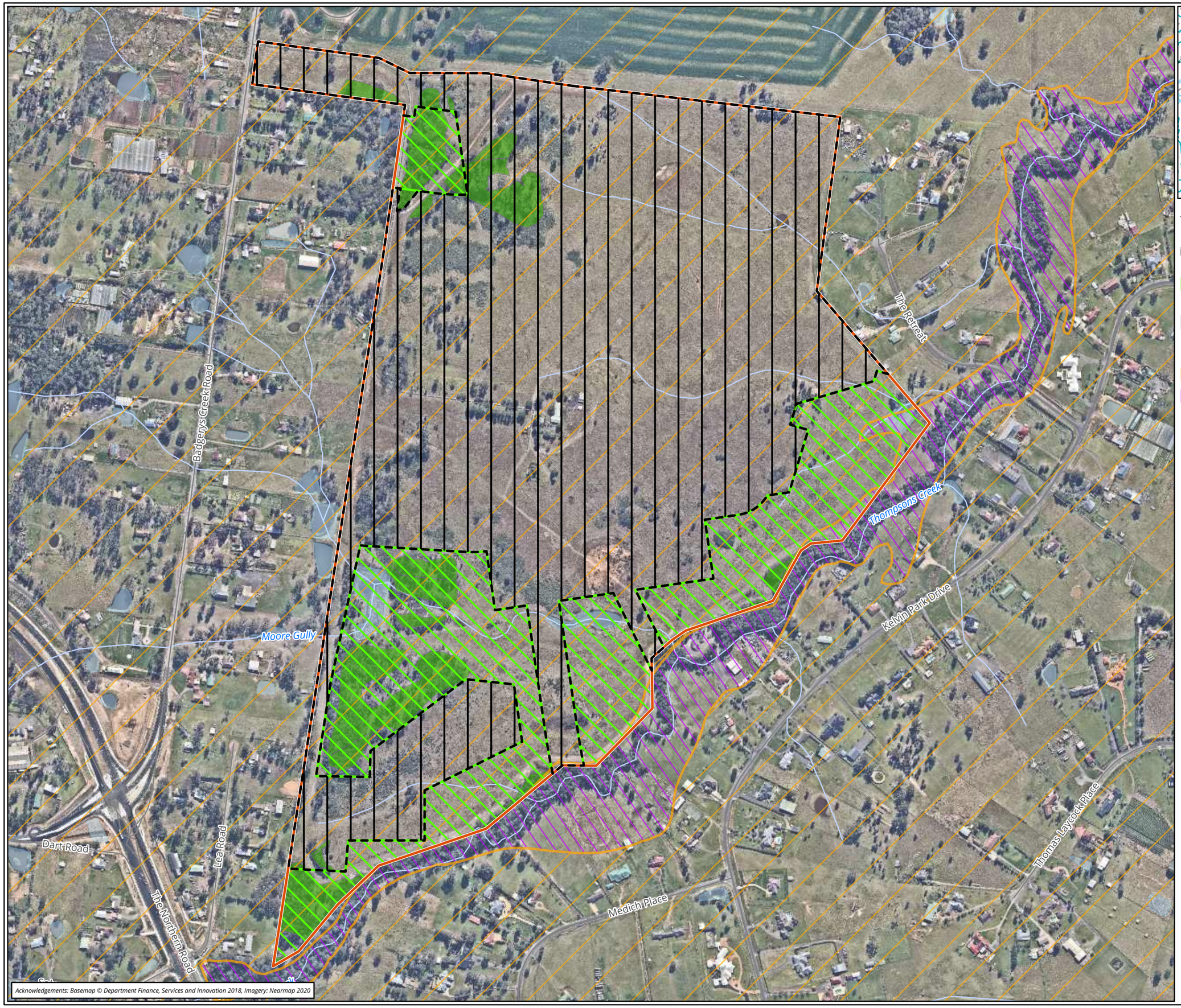
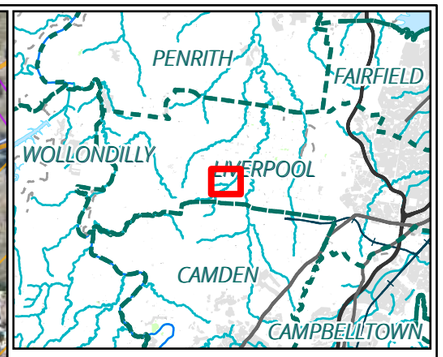
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

Appendix 4 – Figures





Legend

- Study area
- Development footprint
- Open Space (Western Parkland City Authority, 2023)
- Groundtruthed Existing Native Vegetation (ENV)

Growth Centres SEPP (DPE 2023)

- Certified area
- Non-certified area

Figure 4 Biodiversity certified land and ENV

0 100 200 300
Metres

N

Scale: 1:6,500 @ A3
Coordinate System: GDA 1994 MGA Zone 56

biosis

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Date: 01 August 2023,
Checked by: MH, Drawn by: AM, Last edited by: lharley
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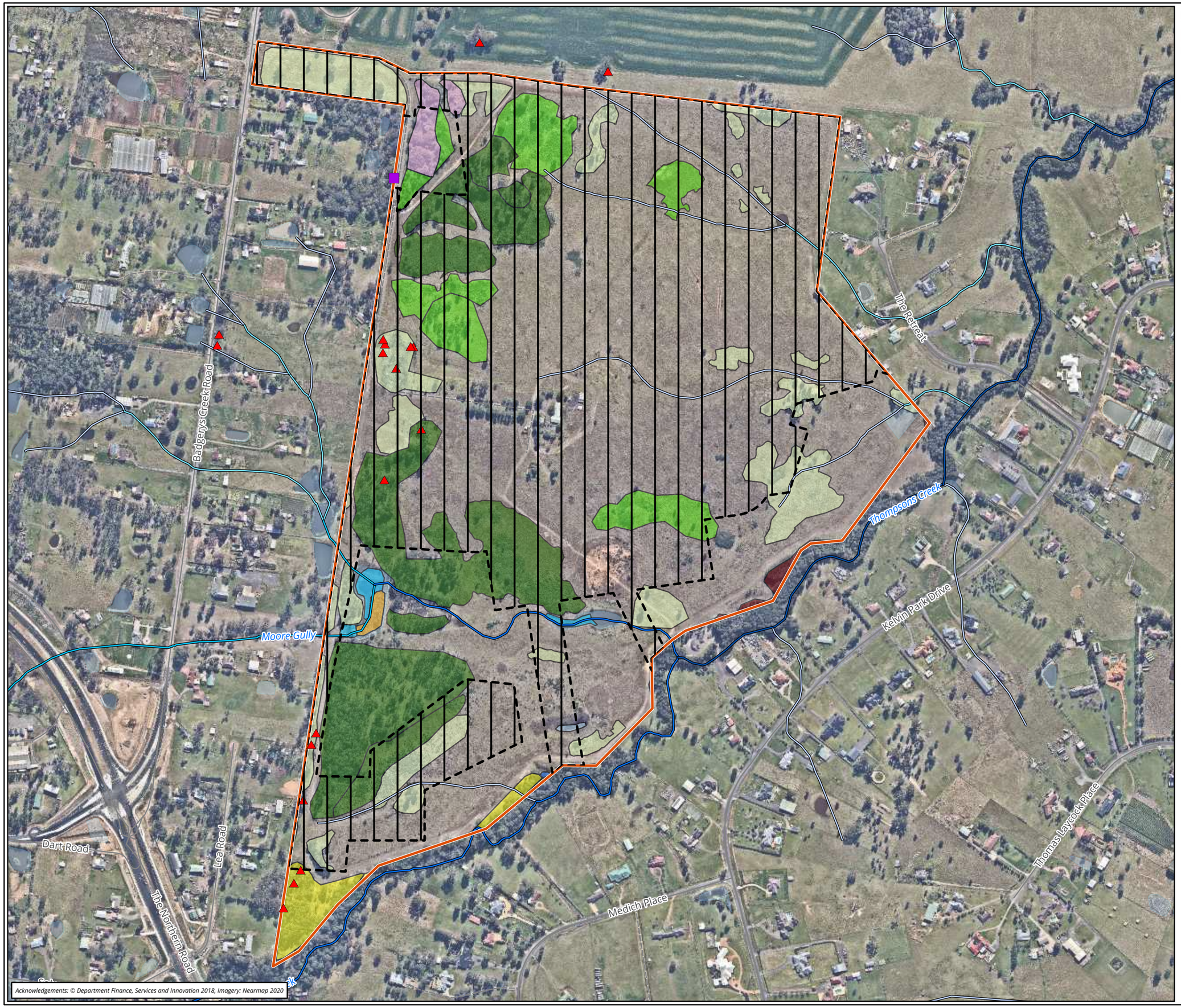

Acknowledgements: © Department Finance, Services and Innovation 2018, Imagery: Nearmap 2020

Legend

- Study area
- Development footprint
- *Marsdenia viridiflora* subsp. *viridiflora*
- Hollow-bearing tree

Plant Community Types

- 725 - Broad-leaved Ironbark - Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion, Moderate condition
- 781 - Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion, High condition
- 781 - Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion, Moderate conditon
- 781 - Coastal freshwater lagoons of the Sydney Basin Bioregion and South East Corner Bioregion, Low condition
- 835 - Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion, High condition
- 849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion, High condition
- 849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion, Moderate condition
- 849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion, Low condition
- 1071 - Phragmites australis and Typha orientalis coastal freshwater wetlands of the Sydney Basin Bioregion, Moderate condition
- 1800 - Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley, High condition

Strahler stream order

- 1
- 2
- 3
- 4
- 5

Figure 5 Ecological values of the study area

0 100 200 300 Metres

N

Scale: 1:6,500 @ A3

Coordinate System: GDA 1994 MGA Zone 56

biosis

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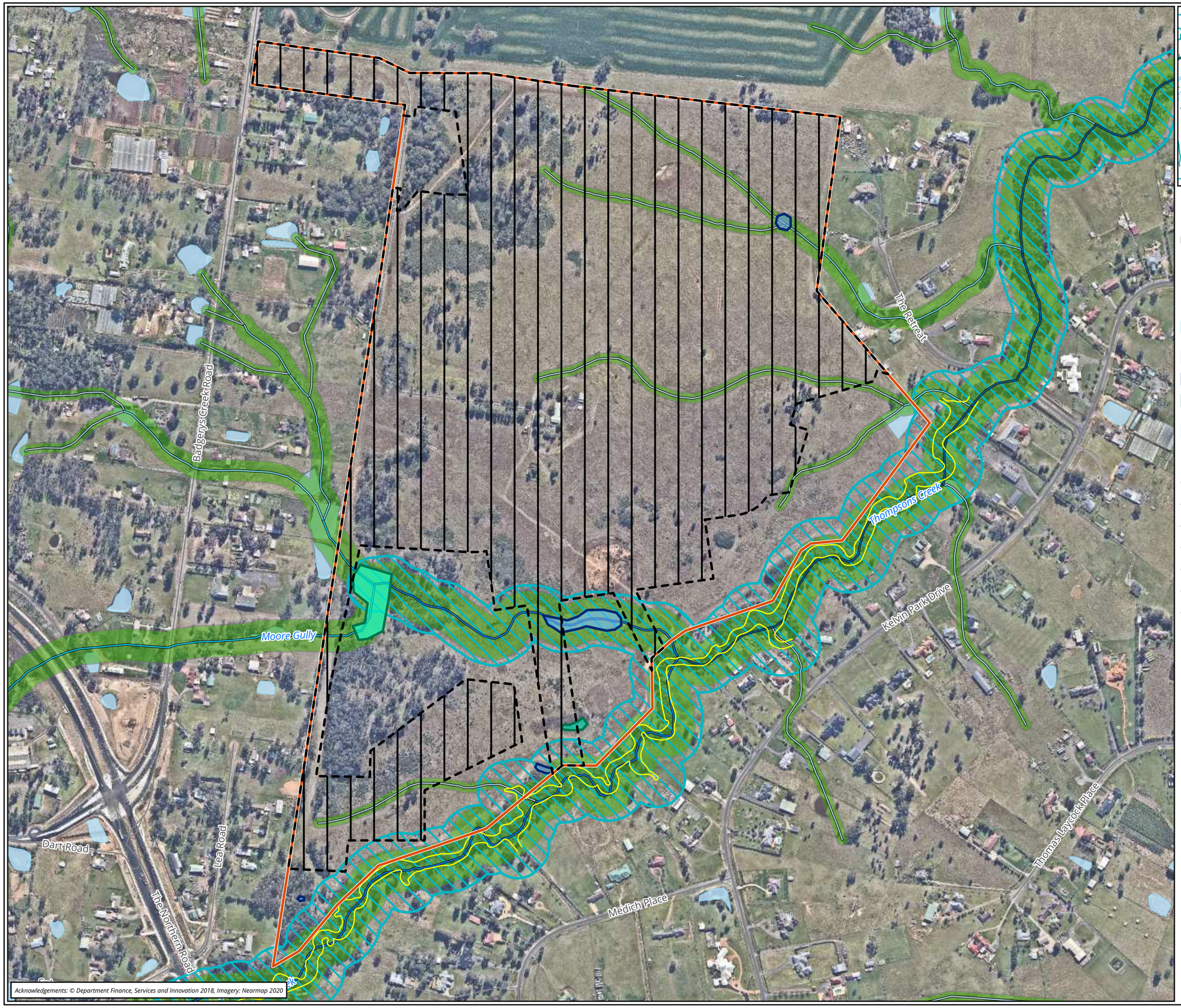

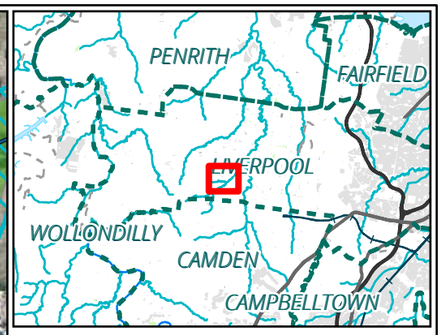

Legend

- Study area
- Development footprint
- Thompson's Creek top of bank (Western City & Aerotropolis Authority 2020)
- Key Fish Habitat riparian buffer zone
- Vegetation Riparian Zone
- Farm dam
- Wetland
- Canal-Drain (Spatial Services 2021)

Strahler stream order

- 1
- 2
- 3
- 4
- 5
- 6
- 7

Figure 6 Aquatic features and riparian buffer zones

0 100 200 300 Metres

N

Scale: 1:6,500 @ A3

Coordinate System: GDA 1994 MGA Zone 56

biosis

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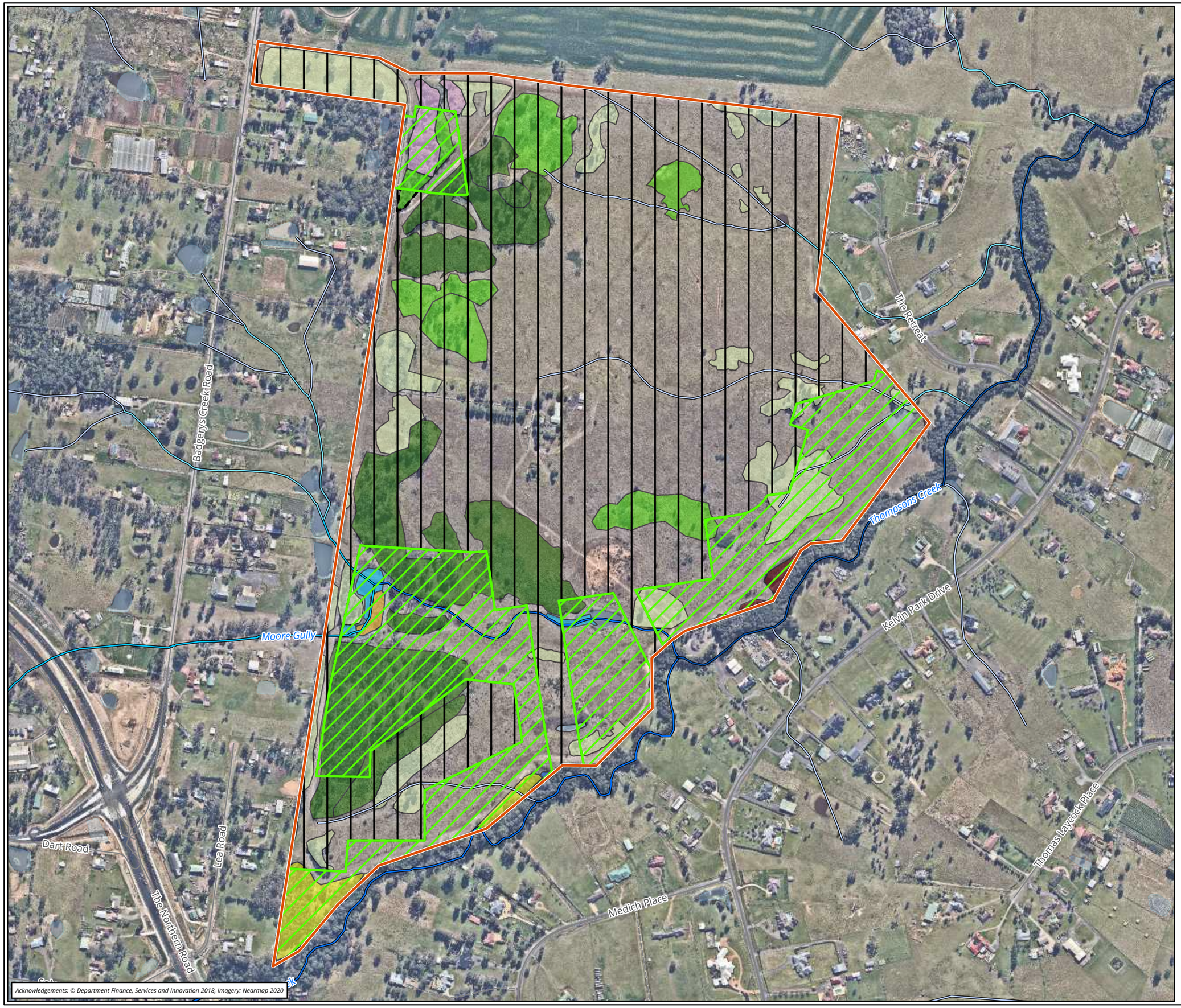

Legend

- Study area
- Development footprint
- Open Space (Western Parkland City Authority, 2023)

Plant Community Types

- 725 - Broad-leaved Ironbark - Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion, Moderate condition
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- 1800 - Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley, High condition

Strahler stream order

- 1
- 2
- 3
- 4
- 5

Figure 7 Impact footprint

0 100 200 300
Metres

N

Scale: 1:6,500 @ A3
Coordinate System: GDA 1994 MGA Zone 56

biosis

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31717_Project.aprx

Western Parkland City Authority

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NSW GOVERNMENT

APPENDIX C

20230913 Air Quality Impact Assessment Report

Western Parkland City Authority

Bradfield City Centre Master Plan Application

Air Quality Impact Assessment

Prepared by Todoroski Air Sciences

September 2023

wpca.sydney

NSW GOVERNMENT

Acknowledgement of Country

Aboriginal people have had a continuous connection with the Country encompassed by the Western Parkland City (the Parkland City) from time immemorial. They have cared for Country and lived in deep alignment with this important landscape, sharing and practicing culture while using it as a space for movement and trade.

We Acknowledge that four groups have primary custodial care obligations for the area: Dharug/Darug, Dharawal/Tharawal, Gundungurra/Gundungara and Darkinjung. We also Acknowledge others who have passed through this Country for trade and care purposes: Coastal Sydney people, Wiradjuri and Yuin.

Western Sydney is home to the highest number of Aboriginal people in any region in Australia. Diverse, strong and connected Aboriginal communities have established their families in this area over generations, even if their connection to Country exists elsewhere. This offers an important opportunity for the future of the Parkland City.

Ensuring that Aboriginal communities, their culture and obligations for Country are considered and promoted will be vital for the future of the Parkland City. A unique opportunity exists to establish a platform for two-way knowledge sharing, to elevate Country and to learn from cultural practices that will create a truly unique and vibrant place for all.

Garungarung Murri Murri Nuru
(Beautiful Grass Country)
Artwork created by Dalmarri artists Jason Douglas and Trevor Eastwood for the Western Parkland City Authority

Version	Status	Date	Prepared By	Reviewer	Comments
1	Draft	22/02/2023	PH (TAS)		First draft
2	Draft	25/03/2023	PH (TAS)		Update based on review comments
3	Draft	08/11/2022	PH (TAS)		Update based on review comments
4	TAP issue	23/11/2022	PH (TAS)		Update based on review comments
5	Final issue	15 June 2023	PH (TAS)		New study template
6	Final issue	23 June 2023	PH (TAS)	DK (TAS)	Update based on final review comments
7	Final issue	30 June 2023	PH (TAS)		Minor update
8	Final issue	4 Aug 2023			Minor update
9	Final issue	17 Aug 2023		JA (WPCA)	Minor update
10	Publish	13 Sept 2023		JA (WPCA)	Amendment to Table 1

Executive Summary

The Western Parkland City Authority (WPCA) is the NSW Government agency responsible for delivering, coordinating and attracting investment to the Western Parkland City. A key component of the WPCA's work is the delivery of the Bradfield City Centre. WPCA has been granted permission by the NSW Department of Planning and Environment (DPE) to prepare a master plan for the Bradfield City Centre.

This air quality impact assessment investigates the potential air quality effects that may arise as a result of the Bradfield City Centre Master Plan within the Western Sydney Aerotropolis. The Bradfield City Centre Master Plan sets out a framework for the development of the site with Stage 1 of the Master Plan which comprises land centred around the future Sydney Metro Station.

The local climatic conditions are typical of conditions experienced in western Sydney with a mean maximum temperature of 30.3 degrees Celsius and mean minimum temperatures of 4.1 degrees Celsius with an average annual rainfall of 658.1 millimetres. The prevailing wind flows in the area surrounding the Bradfield City Centre are from the southwest and are influenced by the local topography of the site. The ambient air quality levels that are monitored at various locations surrounding the Bradfield City Centre indicate that air quality is generally good and is typically below the relevant National Environment Protection Measure (NEPM) Ambient Air Quality and the New South Wales (NSW) Environment Protection Authority (EPA) impact assessment criteria for the various air pollutants. The monitoring data suggests regional air quality effects dominate the measured levels and we would expect with the development of the Bradfield City Centre the ambient air quality levels for the local area will increase slightly relative to the current existing levels.

The air quality assessment requirements for the Bradfield City Centre Master Plan are to aim to achieve ambient air quality levels in accordance with the environmental objectives of the National Environment Protection Measure (NEPM) air quality standards and that future industry and activity can comply with the NSW EPA impact assessment criteria. Controls outlined in the various plans for the Western Sydney Aerotropolis are designed to ensure the air quality amenity of the area remains good and industry and activity does not adversely affect the residential areas within the Bradfield City Centre.

The assessment finds that key components of the Bradfield City Centre Master Plan relating to air quality have considered the likely sources of air pollutants and measures to mitigate elevated levels. The road network is structured with the main transport corridors positioned away from the residential uses. The proposed built form provides variability in building structures which allows for cross wind flows around and between buildings to promote good air flow. The positioning of enterprise activity to the north of residential areas and generally downwind will assist with minimising the potential for air quality impact.

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Glossary of Terms

Aerotropolis	Western Sydney Aerotropolis
Background levels	Existing concentration of pollutants in the ambient air
DPE	NSW Department of Planning and Environment
EPA	Environmental Protection Authority
Incremental impact	The impact due to an emission source (or group of sources) in isolation, i.e. without including background levels.
LGA	Local Government Area
mg/m^3	milligrams per cubic metre
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measures
NO	Nitrogen oxide
NO_2	Nitrogen dioxide
NO_X	Oxides of nitrogen, including NO and NO2
NSW Government	State Government for NSW
OU	Odour units
O3	Ozone
PM_{10}	Particulate matter less than 10 µm in aerodynamic equivalent diameter
$PM_{2.5}$	Particulate matter less than 2.5 µm in aerodynamic equivalent diameter
PPM	Parts per million
Sensitive receptor	A location where people are likely to work or reside; this may include a dwelling, school, hospital, office or public recreational area
SEPP	State Environmental Planning Policy
SO_2	Sulphur dioxide
SO_3	Sulphur trioxide
$\mu g/m^3$	micrograms per cubic metre

References

Ref	Title	Author	Date
1	*National Environmental Protection (Ambient Air Quality) Measure*	*Australia Government*	May 2021
2	*Climate statistics for Australian locations*	*Bureau of Meteorology*	April 2021
3	*Technical framework – Assessment and management of odour from stationary sources in NSW*	*NSW DEC*	November 2006
4	*Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*	*NSW EPA*	August 2022
5	*Draft Aerotropolis Precinct Plan*	*NSW Government*	November 2020
6	*Western Sydney Aerotropolis Development Control Plan 2022 – Phase 2*	*NSW Government*	November 2022
7	*Western Sydney Aerotropolis Precinct Plan*	*NSW Government*	May 2023

1 Introduction

1.1 Purpose of this report

This report accompanies the Master Plan Application for the Bradfield City Centre submitted to the Department of Planning and Environment (DPE).

All matters were considered to have been adequately addressed within the Master Plan Application or in the accompanying appendices.

1.2 The Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,200-hectare region set to become Sydney's third city (the Western Parkland City), and the gateway and economic powerhouse of Western Sydney.

The Aerotropolis comprises of the new Western Sydney (Nancy-Bird Walton) International Airport surrounded by five initial precincts which include the Aerotropolis Core, Wianamatta– South Creek, Northern Gateway, Agri-business and Badgerys Creek outlined in **Figure 1** below.

The final Aerotropolis planning package, including the Precinct Plan and State Environmental Planning Policy (SEPP) Amendment, was gazetted by DPE in March 2022 and the Development Control Plan (DCP) Phase 2 was finalised in November 2022. These documents have been used to inform the preparation of the Bradfield City Centre Master Plan.

The proposed Master Plan Application for the site has also been prepared using the Western Sydney Aerotropolis Master Plan Guideline and Master Plan Requirements.

2 Bradfield City Centre

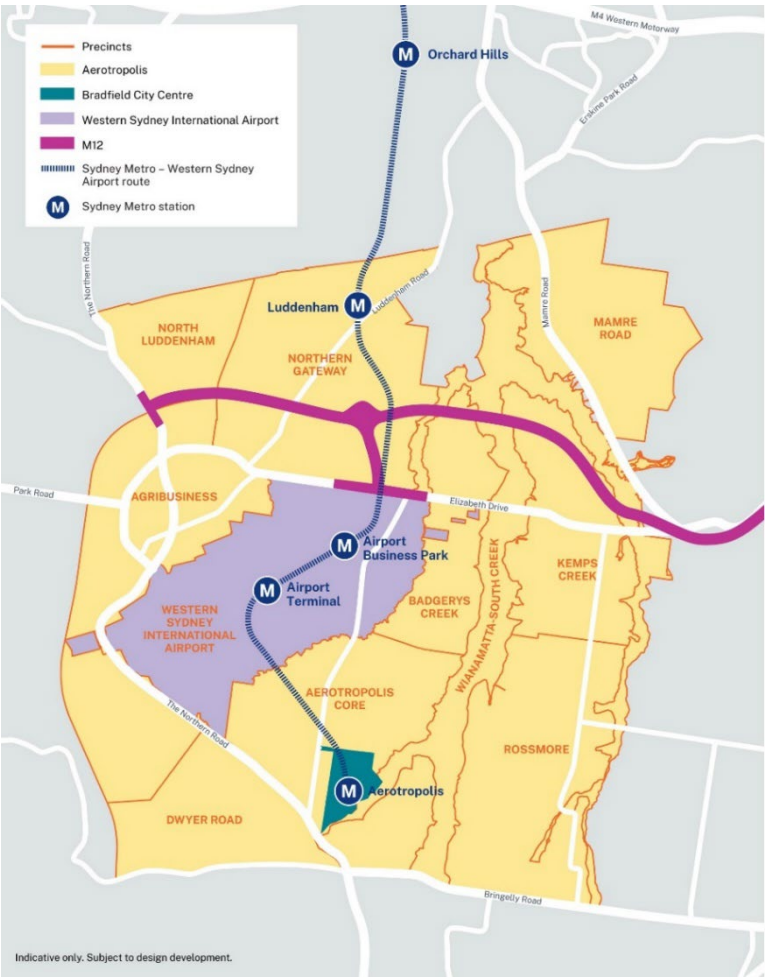
2.1 Strategic Context

The Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and The Northern Road (see **Figure 1** below).

The Sydney Metro Western Sydney Airport line runs through the site, providing connections from the key centre of St Marys through to stations at Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis which is located within the site.

The site is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and The Northern Road.

Figure 1 Strategic Context



Set on natural waterways, Bradfield City Centre presents a rare opportunity to showcase the best urban design and to create a thriving, blue and green, connected City in which Australians will want to live, learn and work. The Bradfield City Centre will be a beautiful and sustainable 22nd Century City. It will foster the innovation, industry and technology needed to sustain the broader Aerotropolis and fast track economic prosperity across the Western Parkland City.

2.2 The Master Plan Site

The street address for Bradfield City Centre is 215 Badgerys Creek Road, Bradfield (the Site) within the Liverpool Council Local Government Area (LGA). The site is legally described as Lot 101 DP 1282949 and has an area of 114.6 hectares, with road access to Badgerys Creek Road located at the north-western corner. The site spans across the Aerotropolis Core and Wianamatta-South Creek Precinct, within Western Sydney Aerotropolis. The Site is outlined in **Figure 2** below.

The Site is predominantly zoned Mixed Use under the Western Parkland City SEPP, with a small portion of Enterprise zoned land located on the north-western corner of the site. The site also includes Environment and Recreation zoned land mostly along Thompsons Creek in the sites south-east.

Figure 2 Master Plan Site

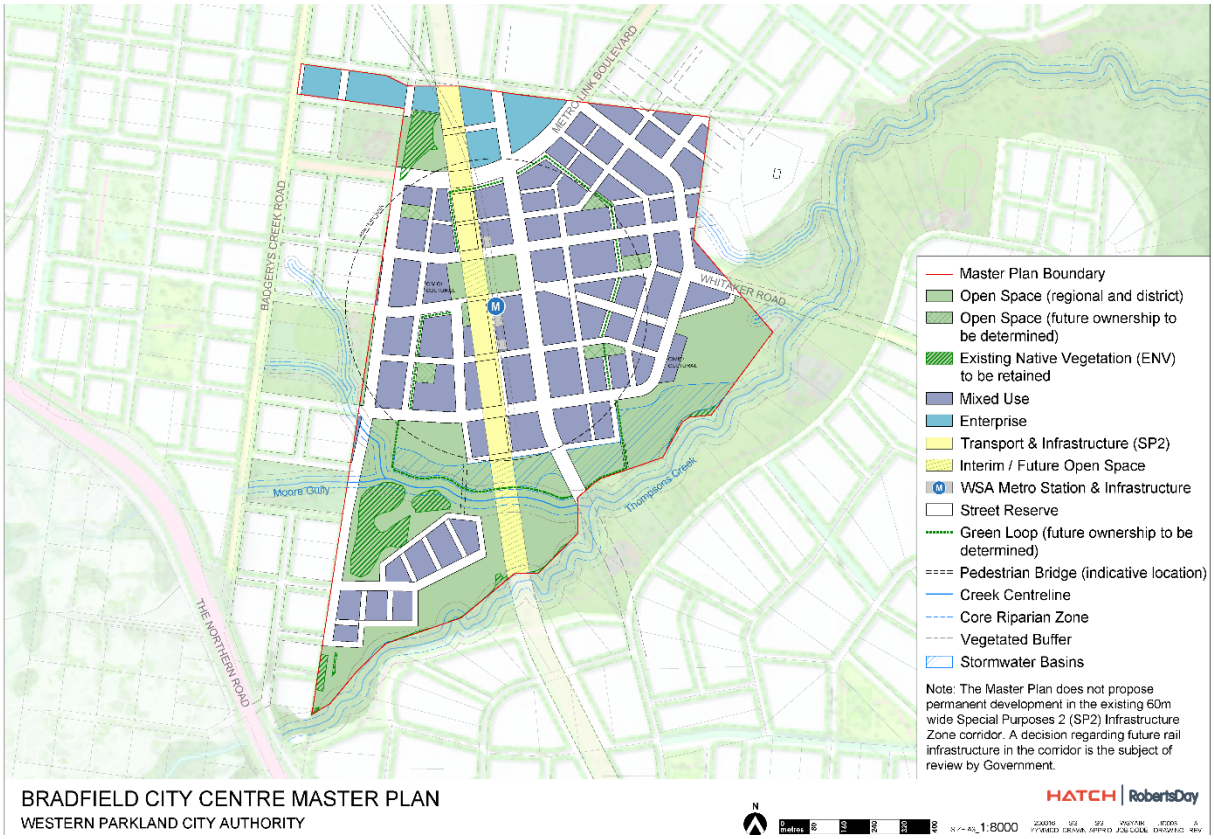
2.3 The Bradfield City Centre Master Plan

The Western Parkland City Authority has prepared a Master Plan (**Figure 3** below) in accordance with the DPE Master Plan Requirements.

The Master Plan sets out a framework for future development within the Bradfield City Centre which includes:

- Road network, key connectors to adjoining land and the regional road network (existing and future)
- Block structure
- Indicative open space network
- Sustainability strategy
- Social and infrastructure strategy
- Arts and culture strategy
- Infrastructure servicing strategy

Figure 3 Master Plan



2.4 The Proposal

The Bradfield City Centre Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons for technical assessments.

Table 1 – Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500 sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000 sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

3 Baseline investigations

This section describes the existing environment including the local setting, topography, climate, meteorology, and ambient air quality.

3.1 Technical baseline site consideration

3.1.1 Local setting

The Bradfield City Centre covers an area of approximately 114.6 hectares (ha) located to the southeast of the Western Sydney Airport and is located approximately 18 kilometres (km) south-southeast of Penrith and approximately 18km east of Liverpool. The existing land use surrounding the Bradfield City Centre consists of a mixture of low density residential and rural properties.

The Bradfield City Centre area is defined by Thompsons Creek to the southeast, Badgerys Creek Road to the west and the proposed location of a new Metro station central to the site.

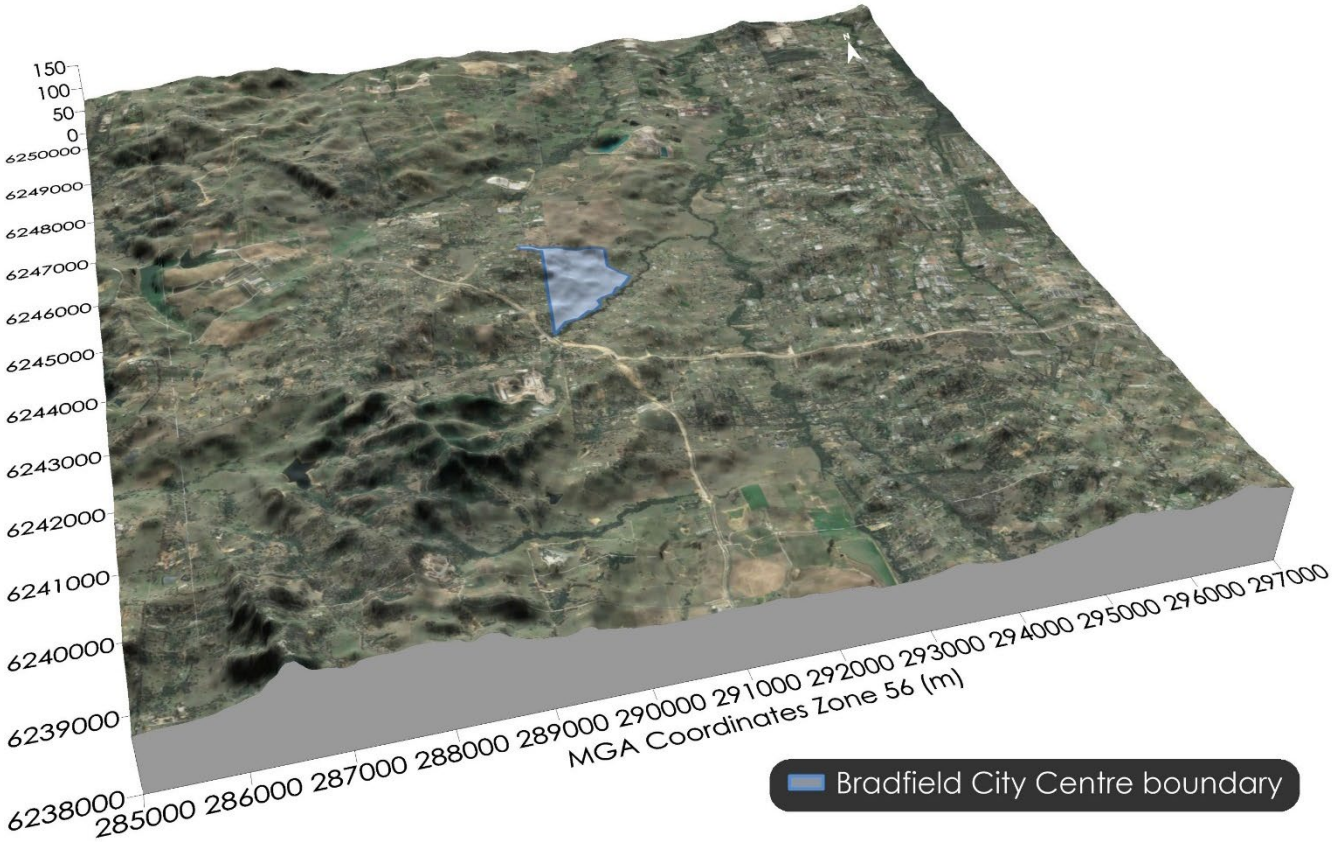
3.1.2 Local topography

Figure 4 presents a three-dimensional visualisation of the terrain features surrounding the Bradfield City Centre.

The topography of the Bradfield City Centre is gently undulating with decreasing elevation to the southeast towards Thompsons Creek. Outside of the Bradfield City Centre there are elevated ridges to the southwest and northwest. To the east of the site the terrain remains relatively flatter with some slight undulations.

The terrain features of the surrounding area influence the local wind distribution patterns and flows which are important for the dispersion and propagation of air and odour emissions.

Figure 4 Representative visualisation of the local topography



3.1.3 Local climatic conditions

Table 2 and **Figure 5** present a summary of data from the Badgerys Creek Automatic Weather Station (AWS) site collected over an approximate 14 to 25-year period for the various meteorological parameters.

The data indicates that January is the hottest month with a mean maximum temperature of 30.3 degrees Celsius (°C). July is the coldest month with mean minimum temperatures of 4.1°C.

Rainfall is generally higher during the first half of the year, with an average annual rainfall of 658.1 millimetres (mm) over 66.9 days. The data shows February is the wettest month with an average rainfall of 108.8mm over 7.4 days and July is the driest month with an average rainfall of 24.8mm over 3.8 days.

Relative humidity levels exhibit some variability over the year and seasonal fluctuations. Mean 9am relative humidity levels range from 62% in October to 84% in June. Mean 3pm humidity levels vary from 44% in August and September to 56% in June.

Wind speeds have a greater spread between the 9am and 3pm conditions during the cooler months of the year compared to the warmer months. The mean 9am wind speeds range from 8.4 kilometres per hour (km/h) in March to 11.8km/h in October. The mean 3pm wind speeds vary from 13.7km/h in June to 19.9km/h in October.

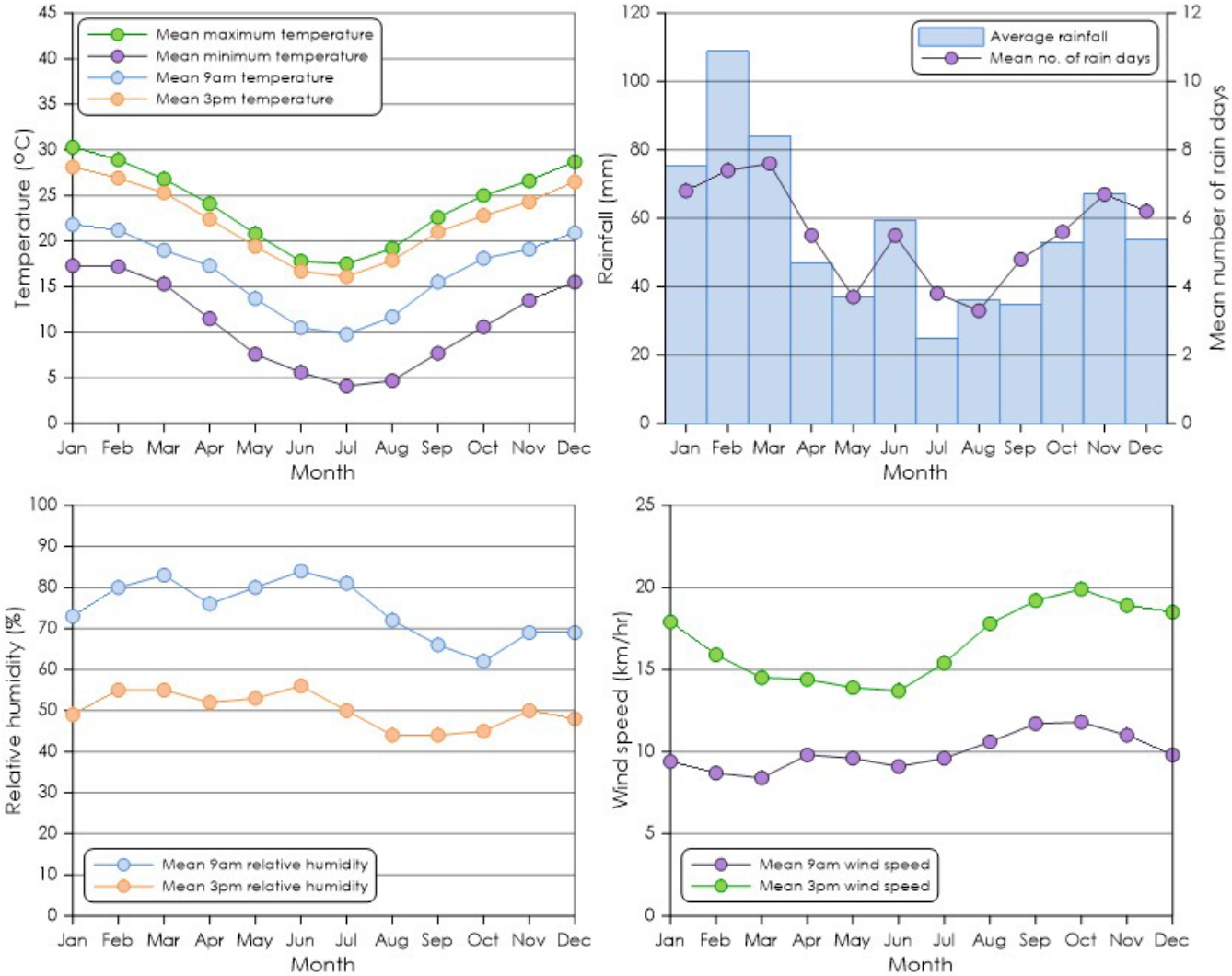
Table 2 – Monthly climate statistics summary – Badgerys Creek AWS

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann.
Temperature													
Mean max. temp. (°C)	30.3	28.9	26.8	24.1	20.8	17.8	17.5	19.2	22.6	25.0	26.6	28.7	24.0
Mean min. temp. (°C)	17.3	17.2	15.3	11.5	7.6	5.6	4.1	4.7	7.7	10.6	13.5	15.5	10.9
Rainfall													
Rainfall (mm)	75.1	108.8	84.1	46.8	36.8	59.2	24.8	36.2	34.9	52.9	66.9	53.6	658.1
No. of rain days (≥1mm)	6.8	7.4	7.6	5.5	3.7	5.5	3.8	3.3	4.8	5.6	6.7	6.2	66.9
9am conditions													
Mean temp. (°C)	21.8	21.2	19.0	17.3	13.7	10.5	9.8	11.7	15.5	18.1	19.1	20.9	16.6
Mean R.H. (%)	73	80	83	76	80	84	81	72	66	62	69	69	75
Mean W.S. (km/h)	9.4	8.7	8.4	9.8	9.6	9.1	9.6	10.6	11.7	11.8	11.0	9.8	10.0
3pm conditions													
Mean temp. (°C)	28.1	26.9	25.3	22.4	19.4	16.7	16.1	17.9	21.0	22.8	24.3	26.5	22.3
Mean R.H. (%)	49	55	55	52	53	56	50	44	44	45	50	48	50
Mean W.S. (km/h)	17.9	15.9	14.5	14.4	13.9	13.7	15.4	17.8	19.2	19.9	18.9	18.5	16.7

Source: Bureau of Meteorology (2021)

R.H. – Relative humidity, W.S. – wind speed

Figure 5 Monthly climate statistics summary – Badgerys Creek AWS



3.1.4 Local meteorological conditions

Period and seasonal wind roses generated from data collected at the Badgerys Creek AWS during 2015 to 2020 are presented in **Figure 6**.

For the period reviewed, winds are varied and predominantly occur from the southwest and the west-southwest. In summer, winds predominantly occur from the east. The autumn distribution is similar to the annual distribution with varied winds predominantly from the southwest and the west-southwest. In winter winds typically occur from the southwest and the west-southwest. In spring, the winds from the southwest are most dominant and varied winds from other directions.

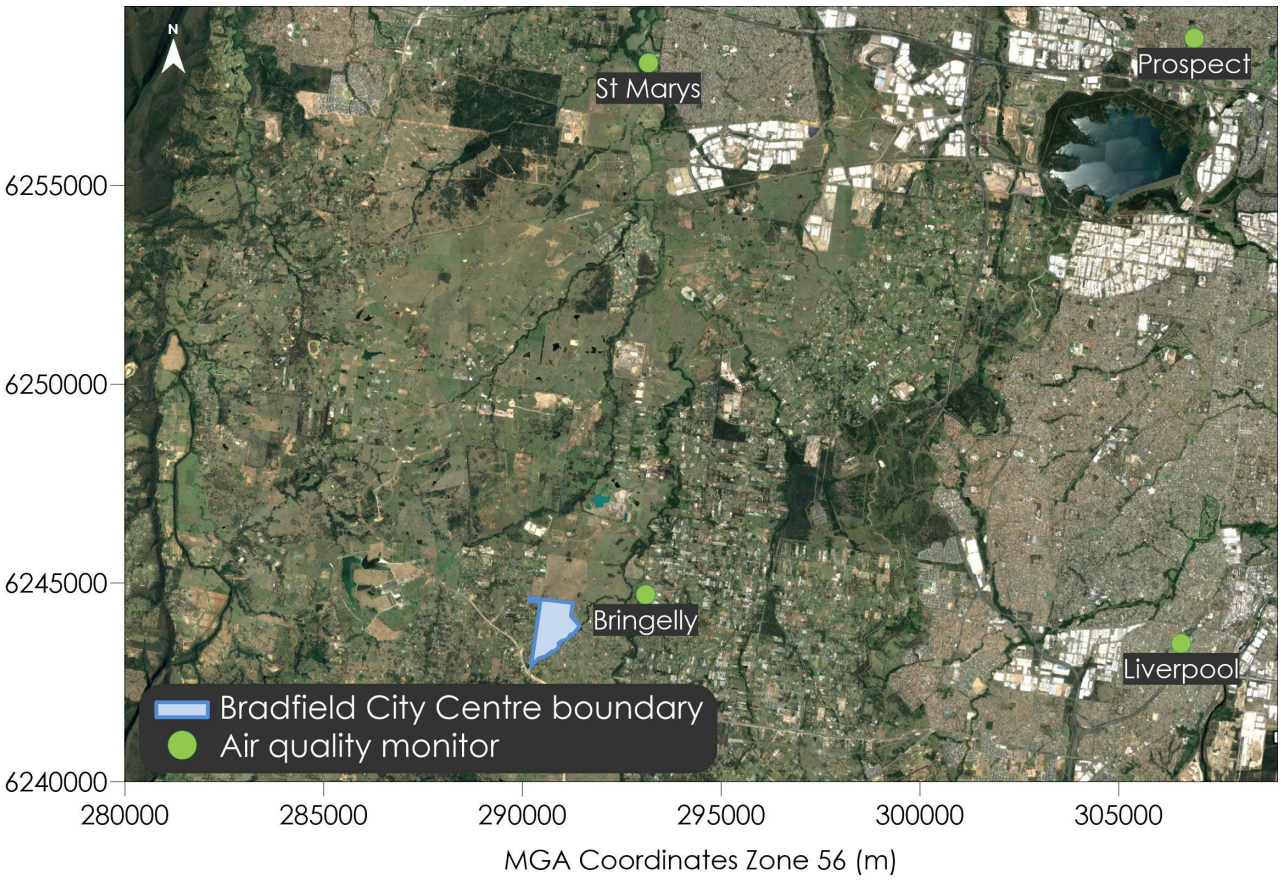
Figure 6 Annual and seasonal windroses for Badgerys Creek AWS (2015-2020)

3.1.5 Local air quality

The available data from air quality monitors operated by the NSW Department of Planning & Environment (DPE) were used to quantify the existing background level for assessed pollutants at the Bradfield City Centre site. These include the St Marys, Prospect, Liverpool and Bringelly monitors. The location of these monitors relative to the Bradfield City Centre site are approximately 14.5km, 22km, 16km and 2.6km, respectively.

Figure 7 presents the location of the air quality monitors reviewed.

Figure 7 Air quality monitoring locations



3.1.5.1 PM_{10} monitoring

A summary of the available annual average PM_{10} monitoring data from the NSW DPE monitoring stations is presented in **Table 3**.

A review of **Table 3** indicates that the annual average PM_{10} concentrations for all monitoring stations reviewed were below the relevant NSW EPA criterion of 25µg/m^3 with the exception of the Liverpool and the Prospect monitors which exceeded the relevant criterion during the 2019 calendar year. The likely cause of the elevated annual levels at the Liverpool and Prospect monitors was the NSW bushfire event during 2019.

Table 3 – Summary of annual average PM_{10} levels from NSW DPE monitoring (µg/m³)

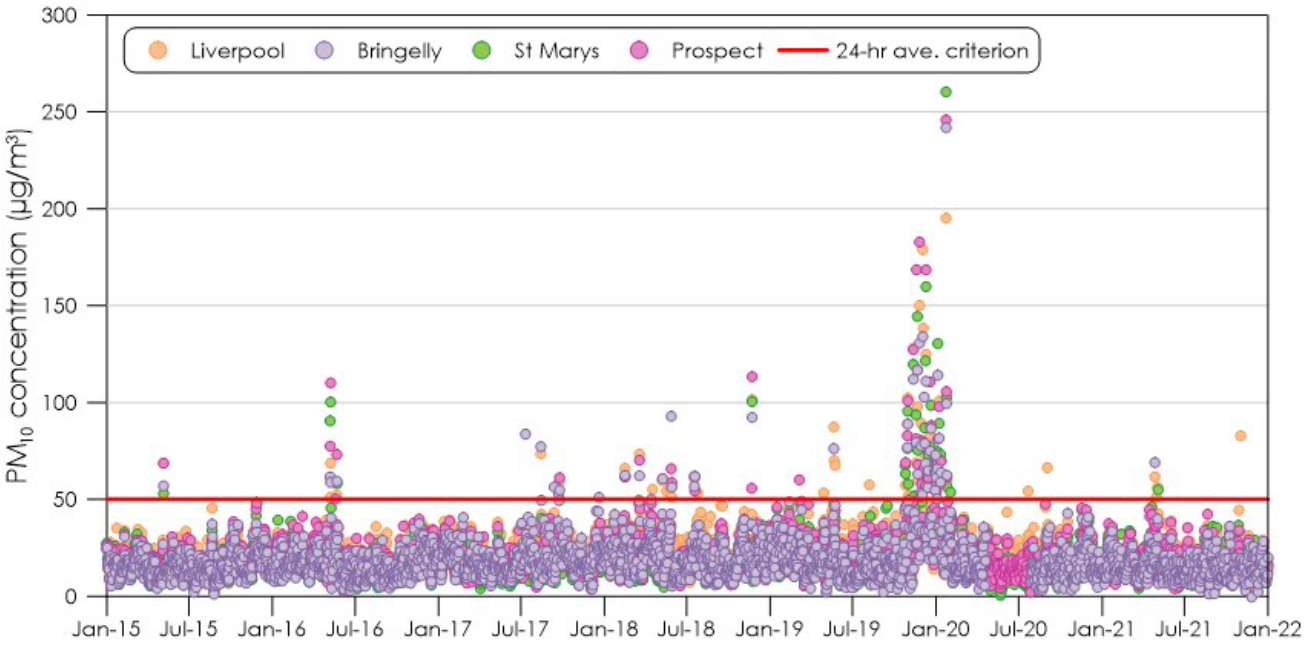
Year	Liverpool	Bringelly	St Marys	Prospect	Criterion
2015	18.4	15.8	15.0	17.6	**25**
2016	19.5	16.9	16.1	18.9	**25**
2017	20.6	19.8	16.2	18.9	**25**
2018	24.2	21.2	19.4	21.9	**25**
2019	**27.7**	23.6	24.7	**26.0**	**25**
2020	20.8	20.1	18.9	20.2	**25**
2021	18.1	15.3	16.2	17.2	**25**

Recorded 24-hour average PM_{10} concentrations are presented in **Figure 8**.

It can be seen from **Figure 8** that PM_{10} concentrations nominally peak in spring and summer with the warmer weather raising the potential for drier ground, elevating the occurrence of windblown dust.

A brief examination of the elevated PM_{10} levels indicates that they typically correspond with regional dust events and bushfires which affect a wide area, this is particularly evident in 2019 as a result of the NSW bushfires in November and December. At other times, potential dust sources such as local agricultural sources, industrial activity and other such dust sources may have contributed to periods of elevated PM_{10} levels.

Figure 8 24-hour average PM_{10} concentrations



3.1.5.2 $PM_{2.5}$ monitoring

A summary of the available annual average $PM_{2.5}$ monitoring data from the NSW DPE monitoring stations is presented in **Table 4**.

A review of **Table 4** indicates that the annual average $PM_{2.5}$ concentrations for all monitoring stations were below the NSW EPA criterion of 8µg/m^3 with the exception of the Liverpool and Prospect monitors in 2015 and 2016, the Liverpool monitor in 2017, the Liverpool, Bringelly and Prospect monitors in 2018, all monitors in 2019 and the Liverpool, Bringelly and Prospect monitors in 2020. The likely cause of the elevated annual levels at the monitors are attributed to bushfire events, wood smoke from domestic wood heaters and automobile exhaust.

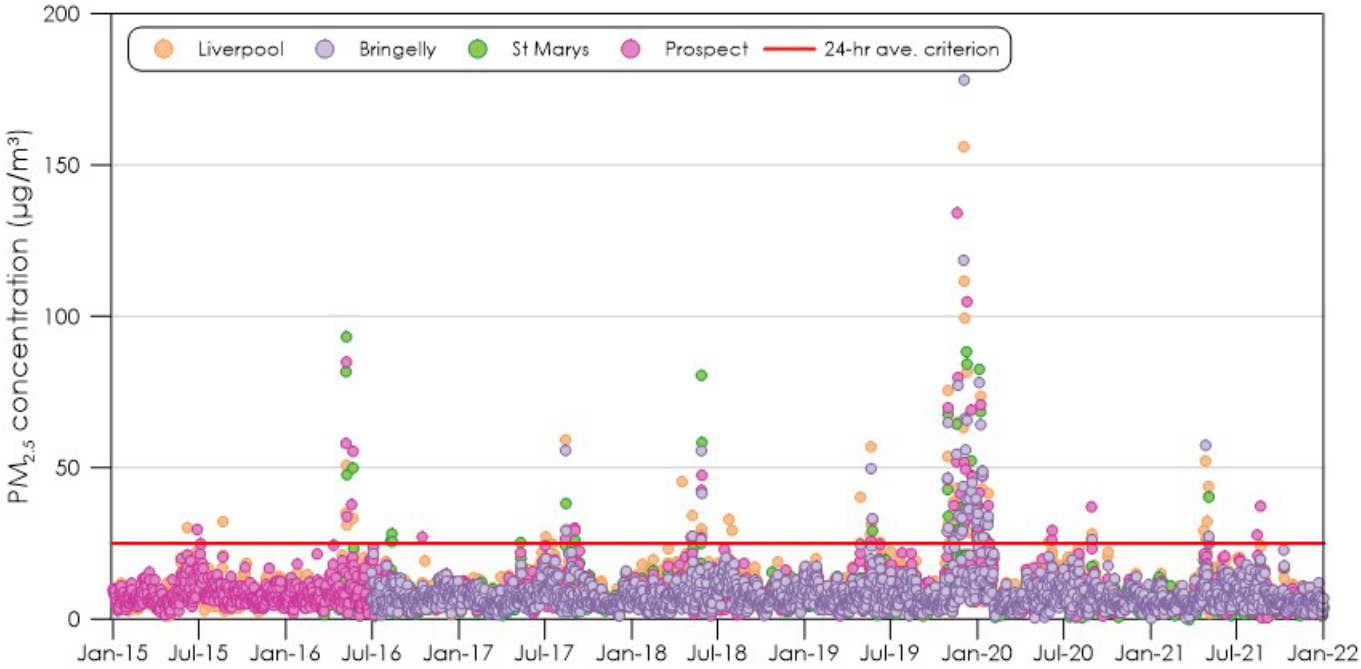
Table 4 – Summary of annual average $PM_{2.5}$ levels from NSW DPE monitoring (µg/m^3)

Year	Liverpool	Bringelly	St Marys	Prospect	Criterion
2015	**8.5**	-	-	**8.2**	**8**
2016	**8.8**	7.6	7.9	**8.7**	**8**
2017	**8.9**	7.5	7.0	7.7	**8**
2018	**10.1**	8.0	7.8	**8.5**	**8**
2019	**12.8**	**11.3**	**9.8**	**11.9**	**8**
2020	**9.1**	**8.5**	7.6	**8.6**	**8**
2021	7.9	7.2	5.8	6.9	**8**

Recorded 24-hour average $PM_{2.5}$ concentrations are presented in **Figure 9**.

It can be seen from **Figure 9** that $PM_{2.5}$ concentrations follow a seasonal trend with peaks occurring in winter periods and are likely associated with wood heater emissions. This is opposite to the seasonal trend for PM_{10} concentrations which have elevated levels during the warmer months. As mentioned, the very high $PM_{2.5}$ levels seen in late 2019 are a result of the widespread NSW bushfires.

Figure 9 24-hour average $PM_{2.5}$ concentrations



3.1.5.3 NO_2 monitoring

A summary of the available annual average NO_2 monitoring data from the NSW DPE monitoring stations is presented in **Table 5**.

A review of **Table 5** indicates that the annual average NO_2 concentrations for all monitoring stations were below the NSW EPA criterion of 62µg/m^3.

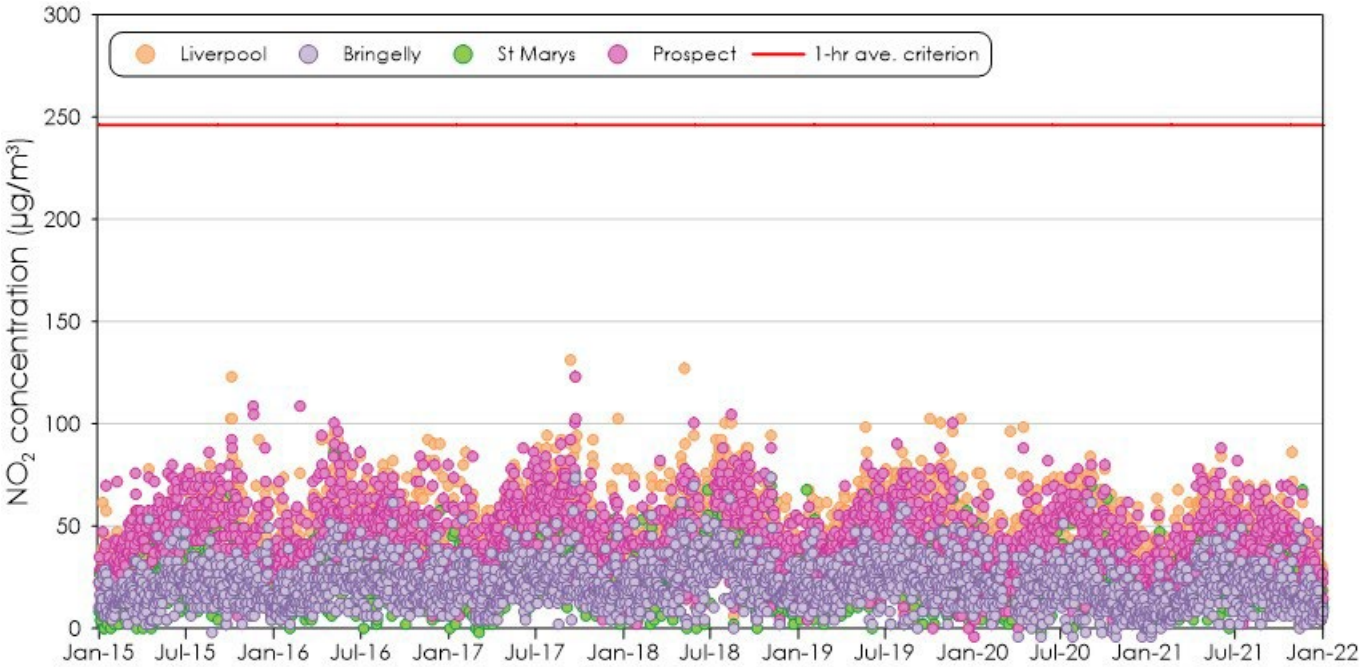
Table 5 – Summary of annual average NO_2 levels from NSW DPE monitoring (µg/m^3)

Year	Liverpool	Bringelly	St Marys	Prospect	Criterion
2015	43.2	19.4	23.0	46.2	62
2016	48.0	22.2	24.3	45.0	62
2017	51.3	22.8	26.1	46.7	62
2018	50.9	25.3	27.5	44.4	62
2019	50.4	24.9	24.6	42.6	62
2020	45.5	17.7	22.8	37.7	62
2021	42.8	18.0	22.4	37.2	62

Recorded daily maximum 1-hour average NO_2 concentrations are presented in **Figure 10**.

It can be seen from Figure 10 the NO_2 concentrations are generally higher in cooler months when temperatures are low and there is less sunlight, making it more difficult for NO_2 to convert to ozone.

Figure 10 Daily maximum 1-hour average NO_2 concentrations



3.1.5.4 SO_2 monitoring

A summary of the available SO_2 data from the NSW DPE monitoring stations is presented in **Table 6.** A review of **Table 6** indicates that the annual average SO_2 concentrations for all monitoring stations were below the NSW EPA criterion of 60µg/m^3.

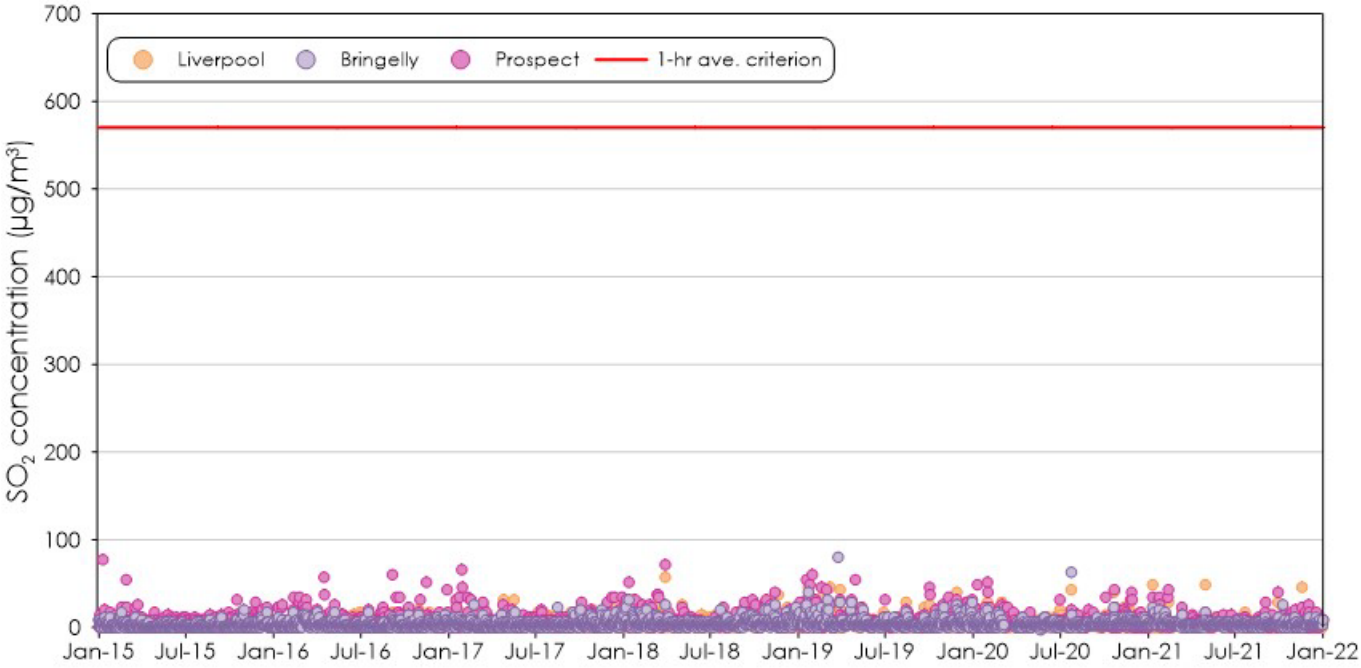
Table 6 – Summary of annual average SO_2 levels from NSW DPE monitoring (µg/m^3)

Year	Liverpool	Bringelly	St Marys	Prospect	Criterion
2015	-	2.3	NA	6.3	60
2016	6.2	3.2	NA	7.5	60
2017	6.6	3.7	NA	7.5	60
2018	7.1	4.9	NA	8.2	60
2019	7.2	5.8	NA	8.3	60
2020	5.1	4.0	NA	6.2	60
2021	5.3	3.8	NA	5.7	60

NA – data not available

Recorded daily maximum 1-hour average SO_2 concentrations are presented in **Figure 11**. It can be seen from **Figure 11** that SO_2 concentrations are low and there is no apparent seasonal trend.

Figure 11 Daily maximum 1-hour average SO_2 concentrations



3.1.5.5 CO monitoring

A summary of the available maximum 1-hour average CO data from the NSW DPE monitoring stations is presented in **Table 7**. It is noted that the Bringelly and St Marys monitors do not record measured CO data. **Table 7** indicates that the maximum 1-hour average CO concentrations for all monitors during the review period are well below the NSW EPA criterion.

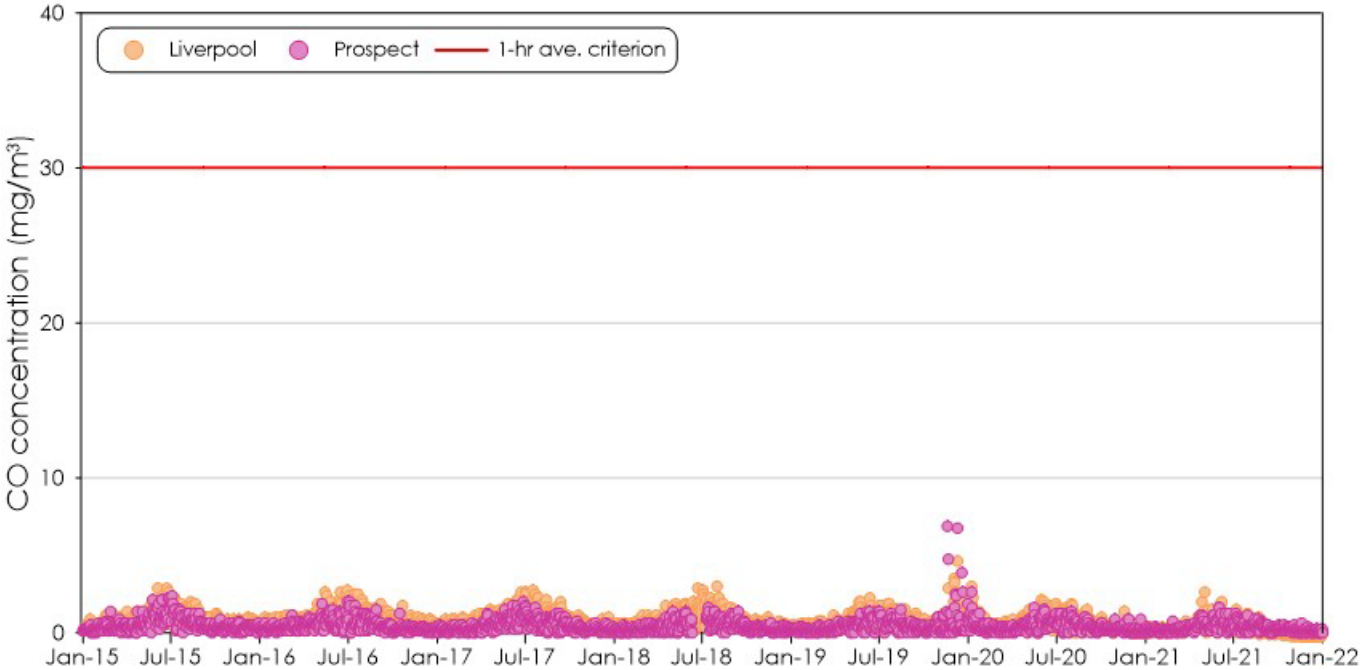
Table 7 – Summary of maximum 1-hour average CO levels from NSW DPE monitoring (µg/m³)

Year	Liverpool	Bringelly	St Marys	Prospect	Criterion
2015	2.9	NA	NA	2.4	**30**
2016	2.8	NA	NA	2.0	**30**
2017	2.8	NA	NA	2.0	**30**
2018	3.0	NA	NA	1.6	**30**
2019	4.6	NA	NA	6.9	**30**
2020	3.0	NA	NA	2.6	**30**
2021	2.6	NA	NA	1.6	**30**

NA – data not available

Recorded daily maximum 1-hour average CO concentrations are presented in **Figure 12**. **Figure 12** shows a similar seasonal trend to the NO_2 data with levels increasing during the cooler months.

Figure 12 Daily maximum 1-hour average CO concentrations



3.1.5.6 O_3 monitoring

A summary of the available maximum 1-hour average O_3 data from the NSW DPE monitoring stations is presented in **Table 8**.

Table 8 indicates that the 1-hour average O_3 concentrations for all monitoring stations were below the NSW EPA criterion of 214µg/m^3 with the exception of the St Marys and Prospect monitors in 2015, the Liverpool, St Marys and Prospect monitors and 2016, and all monitors in 2018, 2019 and 2020. The likely cause of the elevated 1-hour average levels at the monitors are attributed to bushfires events, high photochemical activity and emissions of ozone precursors.

Table 8 – Summary of maximum 1-hour average O_3 levels from NSW DPE monitoring (µg/m^3)

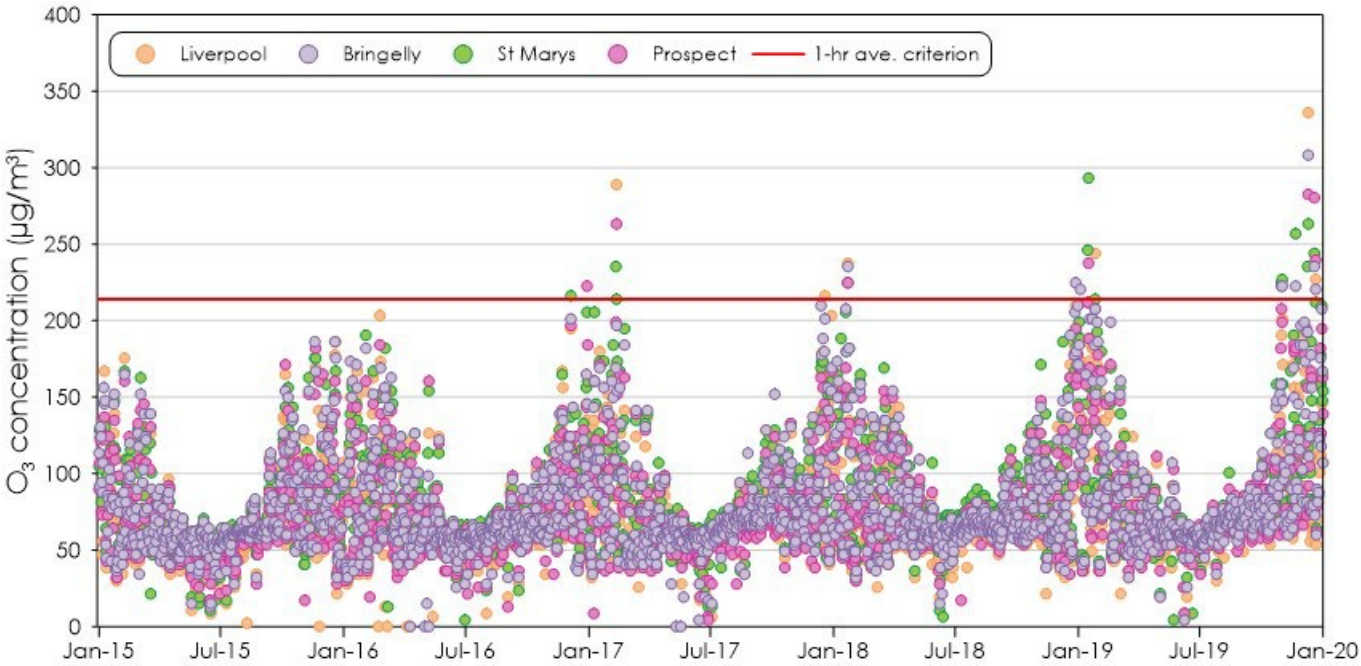
Year	Liverpool	Bringelly	St Marys	Prospect	Criterion
2015	186.2	186.2	175.5	181.9	214
2016	203.3	201.2	**216.1**	**222.6**	214
2017	**288.9**	209.7	**235.4**	**263.2**	214
2018	**237.5**	**235.4**	**224.7**	**224.7**	214
2019	**336.0**	**308.2**	**293.2**	**282.5**	214

Year	Liverpool	Bringelly	St Marys	Prospect	Criterion
2020	**218.3**	**239.7**	**246.1**	**218.3**	214
2021	199.0	199.0	149.8	190.5	214

NA – data not available

Recorded daily maximum 1-hour average O_3 concentrations are presented in **Figure 13**. **Figure 13** shows a seasonal trend with O_3 levels increasing during the warmer months.

Figure 13 Daily maximum 1-hour average O_3 concentrations



3.1.5.7 Existing odour

Existing odour sources in the surrounding area would likely comprise of operating poultry farms and from other agricultural activities.

The development of the Bradfield City Centre will change the current makeup of the area to a more urbanised setting and as such it needs to be recognised that some of the key air emission sources would no longer be compatible and may need to cease or relocate to other appropriate locations.

3.2 Area of Focus

Overall, the monitors indicate generally similar levels of ambient air quality at each of the monitoring stations reviewed which suggests regional air quality effects dominate the measured levels.

It is noted that urban monitors (e.g., Liverpool and Prospect) record typically more elevated levels which would be influenced by localised sources including a greater density of anthropogenic sources such as wood heaters, combustion engines and motor vehicles.

We would expect that with the development of the Bradfield City Centre, the ambient air quality levels will increase slightly relative to the current levels as the site is predominantly low density residential and rural properties (noting the nearest monitor is the Bringelly monitor to the site). The ambient air quality levels at the Bradfield City Centre would be comparable to the other DPE monitors reviewed in the surrounding area.

4 Assessment Requirements and Policy Context

4.1 Master Plan Requirements

The DPE and EPA have issued Master Plan Requirements (MPRs) to WPCA for the preparation of a Master Plan for Bradfield City Centre. This report has been prepared to address the following MPRs. **Table 9** presents the Master Plan Requirements.

Table 9 - Master Plan Requirements

Reference	Master Plan Requirement	Where addressed
4. NSW DPE Air Quality and Odour	The Assessment references one odour intensive use, namely, poultry. It is not clear what activity the Assessment is referring to. The EPA recommends that the Assessment include greater detail regarding likely air emission and odour impacts on sensitive receivers in the city centre from existing industrial uses in the area (see list of nearby scheduled activities above). This analysis would be most effective if it was informed by on-site testing . This would enable mitigation strategies, such as buffers, to be developed. Additionally, potential future industrial uses may exacerbate existing odour issues, particularly if further intensive agriculture and poultry activities are located nearby the city centre. The Assessment would be strengthened by recognising this risk in terms of cumulative impact."	Section 3.1.5.7
5. NSW EPA Air Quality and Odour	Comment on the amended road network proposed under the masterplan and potential impact on air quality	Section 5.1

4.2 National and State Government Plans/Policies

Air quality standards and goals are benchmarks set to protect the general health and amenity of the community in relation to air quality.

The following sub-sections identify the relevant standards and goals for the likely air pollutants of consideration for the Bradfield City Centre Master Plan.

4.2.1 National Environmental Protection (Ambient Air Quality Measures)

The *National Environment Protection Council (NEPC) Act 1994* and subsequent amendments define the National Environment Protection Measures (NEPMs) as instruments for setting environmental objectives in Australia.

It is important to note that NEPM air quality standards are not designed to be applied to specific projects. The NEPM standards apply to the average exposure to air pollutants of the general population, in each state. The NEPM requires that the states report to the Commonwealth on the trends in air quality by way of reference to the standards. The NEPM allows communities to understand their local air quality and assist the formulation of air quality policies.

The NEPM Ambient Air Quality Measure specifies national ambient air quality standards for air pollutants as outlined in **Table 10**. The NEPM Ambient Air Quality Measure was recently amended in May 2021 to include more stringent NO_2 and SO_2 goals.

Table 10 – Standards for Pollutants

Pollutant	Averaging period	Maximum concentration standard
Carbon monoxide (CO)	8 hours	9.0 ppm
Nitrogen dioxide (NO_2)	1 hour	0.08 ppm
	1 year	0.015 ppm
Ozone (O_3)	8 hours	0.065 ppm
Sulphur dioxide (SO_2)	1 hour	0.1 ppm
	1 day	0.02 ppm
Particles as PM_{10}	1 day	50 µg/m^3
	1 year	25 µg/m^3
Particles as $PM_{2.5}$	1 day	25 µg/m^3
	1 year	8 µg/m^3

Source: **Australian Government (2021)**

4.2.2 Protection of the Environment Operations Act 1997

The general obligations of the Protection of the Environment Operations Act, 1997 and the Regulations made under the Act (namely the Protection of the Environment Operations (Clean Air) Regulation, 2021) are the regulatory mechanisms for reducing emissions of harmful air pollutants in NSW.

The Clean Air Regulation specifies limits for the air emission concentration of designated pollutant by plant, equipment, industrial and commercial activities, households and fuels which are enforced by the NSW EPA.

4.2.3 NSW EPA Impact Assessment Criteria

The NSW EPA assess significant new or modified industry and activity using a set of air quality goals as outlined in the NSW EPA document *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (NSW EPA, 2022).

The air quality goals for total impact relate to the total pollutant burden in the air and not just the pollutants from the industry or activity being assessed (incremental impact). Consideration of background pollutant levels needs to be made when using these goals to assess potential impacts.

Table 11 presents the air quality goal relevant for the Bradfield City Centre Master Plan.

Table 11 – NSW EPA air quality impact assessment criteria

Pollutant	Averaging period	Percentile	Impact	Criteria
CO	15 minutes	100	Total	100 mg/m^3
	1 hour	100	Total	30 mg/m^3
	8 hours	100	Total	10 mg/m^3
NO_2	1 hour	100	Total	164 µg/m^3
	1 year	100	Total	31 µg/m^3
O_3	8 hours	100	Total	139 µg/m^3
SO_2	1 hour [a]	100	Total	286 µg/m^3
	1 hour [b]	100	Total	215 µg/m^3
	24 hours	100	Total	228 µg/m^3
Particles as PM_{10}	24 hours	100	Total	50 µg/m^3
	1 year	100	Total	25 µg/m^3
	24 hours	100	Total	25 µg/m^3

Pollutant	Averaging period	Percentile	Impact	Criteria
Particles as $PM_{2.5}$	1 year	100	Total	8 µg/m^3
Total suspended particulates	Annual	100	Total	90 µg/m^3
Deposited dust	Annual	100	Incremental	2 g/m^2/month
	Annual	100	Total	4 g/m^2/month
Odour	1 hour peak to mean corrected	99	Incremental	2 OU

[a] Applies to assessments prepared before 1 January 2025
[b] Applies to assessment prepared after 1 January 2025
Source: **NSW EPA (2022)**

4.2.4 NSW EPA Odour Policy

The NSW EPAs policy framework for managing odour is set out in the NSW EPA documents *Technical Framework – Assessment and Management of Odour from Stationary Sources in NSW* (NSW DEC, 2006).

The framework guides the management of odour concerns by industry, planners, consent authorities, environmental regulators and odour experts. It suggests best management practices and continual environmental improvement to stop or lessen odour and avoid land use conflict.

4.3 Western Sydney Aerotropolis

The relevant air quality related controls in the various plans for the Western Sydney Aerotropolis are listed below.

4.3.1 Aerotropolis Precinct Plan

There are no specific air quality objectives identified in the *Western Sydney Aerotropolis Precinct Plan* (NSW Government, 2023).

4.3.2 Western Sydney Aerotropolis Development Control Plan 2022 – Phase 2

There are no specific air quality objectives identified in the *Western Sydney Aerotropolis Development Control Plan 2022 – Phase 2* (NSW Government, 2022).

4.4 Summary of Key Implications for Master Plan

The air quality requirements for the Bradfield City Centre Master Plan are to aim to achieve ambient air quality levels in accordance with the environmental objectives of the NEPM air quality standards and to ensure that future development and activity can comply with the NSW EPA impact assessment criteria.

Controls outlined in the various plans for the Western Sydney Aerotropolis focus on the amenity of the area which includes the potential for air quality impacts associated with existing industry and activity in Bradfield City Centre. As the Western Sydney Aerotropolis is developed, there would be a period of transition for the existing operations to adapt or relocate with the changing landscape.

The Bradfield City Centre Stage 1 development will provide a range of uses including Advanced Manufacturing Research Facilities which may generate some air emissions. These facilities will need to be assessed through detailed design to ensure they do not cause any air quality impacts. Similarly, any future development within the Bradfield City Centre will need to consider their potential for air quality impacts and ensure that they do not adversely affect the amenity of the area.

5 Technical Assessment

The Bradfield City Centre Master Plan Stage 1 includes key components such as the road network, the built form arrangement, and the initial development of the AMRF. These development components have been assessed in further detail as they include air emission sources which may influence the air quality.

5.1 Road network

Road traffic emissions is likely to be a source of air pollution in the Bradfield City Centre that can limit the overall amenity associated with air quality. The road network is structured to provide access to each area within the Precinct and the main transport corridor to the north of the site.

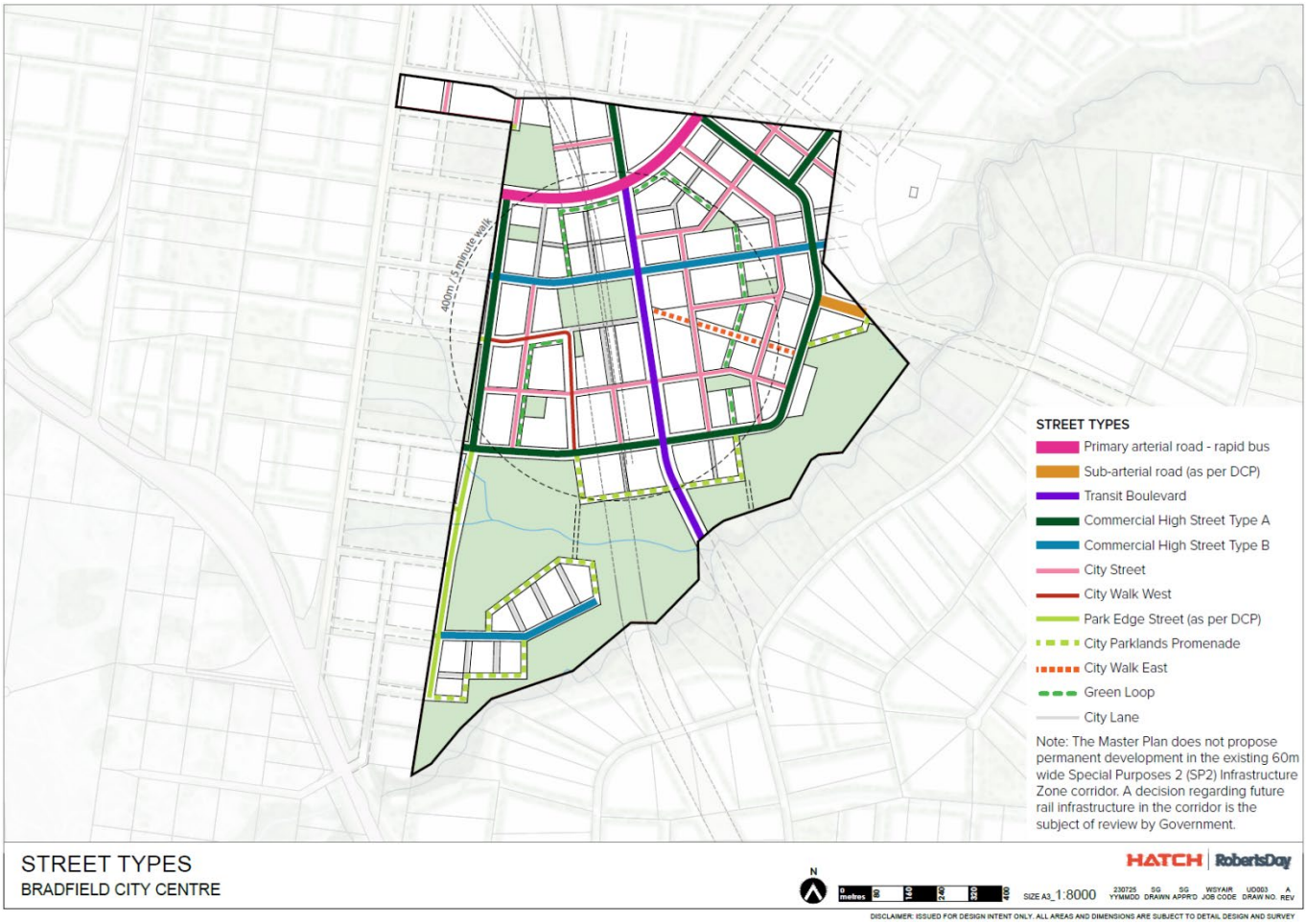
The access through the road network is expected to enable good traffic flows with reduced idling times to minimise the generation of traffic related air emissions. Heavy vehicles are a dominant contributor to the air emissions from traffic with these vehicle types emitting a large proportion relative to passenger cars. It is not expected to see a high proportion of heavy vehicles travelling through the city centre and past more development areas such as the residential areas.

The main arterial roads and road network in the Bradfield City Centre Master Plan is shown in **Figure 14**.

The amount of vegetation and trees positioned along the road network in the Bradfield City Centre Master Plan will result in an improvement of air quality as trees absorb some air pollution.

Traffic related air emissions would be a key air emission source for the immediate future in the Bradfield City Centre. We note that the future vehicle fleet projections indicate that overall exhaust emissions would continue to decrease through engine advancements, greater uptake of electric vehicles, stricter controls on exhaust emissions and improvements in tyre and brake emissions.

Figure 14 Identified main roads



5.2 Built form

The building design and built form of the Bradfield City Centre Master Plan provides variability and a discontinuous façade which would allow for cross wind flows around and between buildings. Laneways and access between the buildings assists with air flows, prevents stagnation and accumulation, and allows for air pollutants to disperse into large volume of air.

The retail / commercial / residential areas incorporate a design that would provide good air flow around and between the buildings. The design avoids construction of dead-end courtyards or long narrow spaces perpendicular to the prevailing winds where air can lay dormant and stagnate. The layout permits the design of buildings so living and workspaces such as bedrooms and offices do not face air emission sources, such as roadways, with cleaner air from central areas of the building directed into the building rather than from the side of the air emission source side.

5.3 Initial development

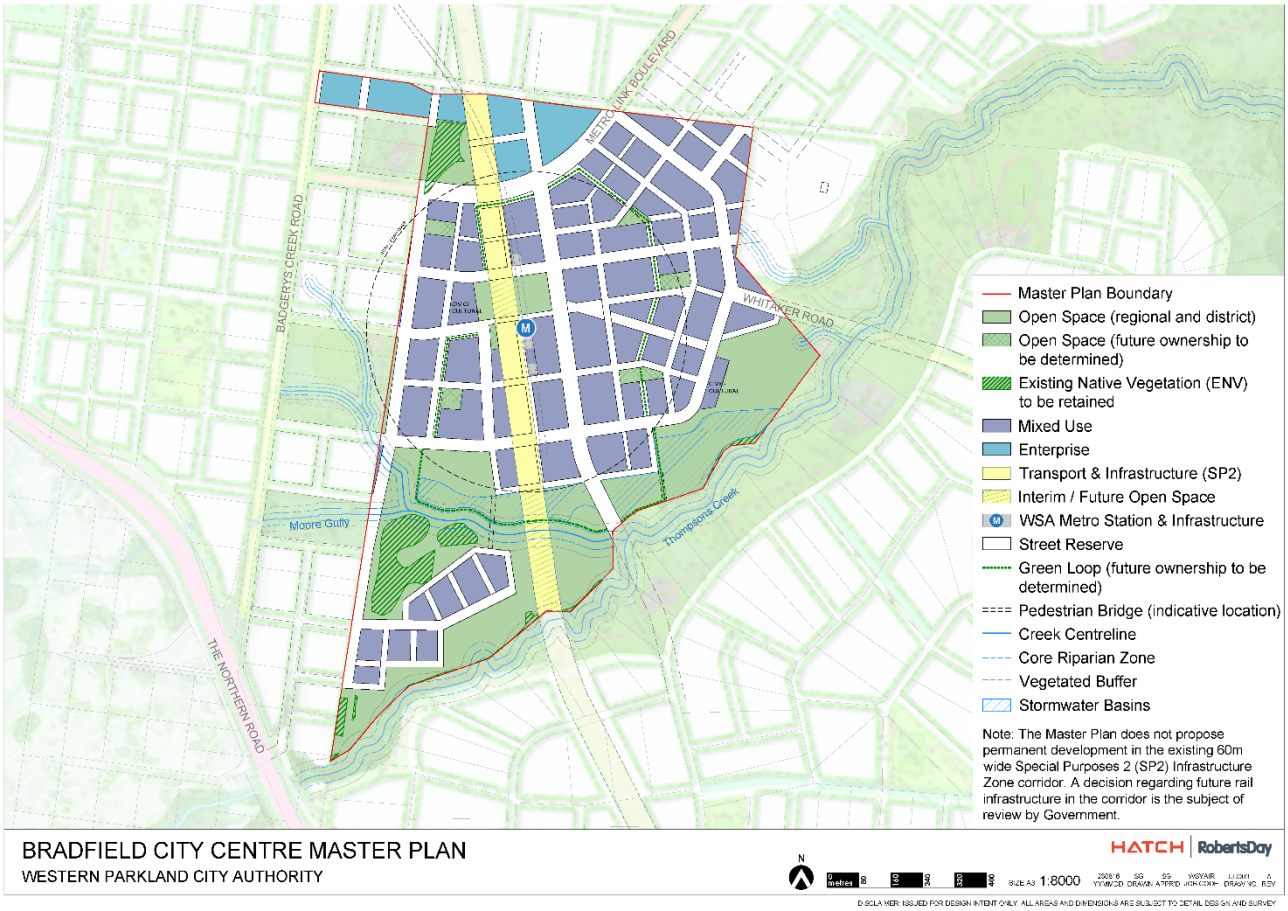
The initial development in Bradfield City Centre Master Plan Stage 1 will provide a range of uses including Advanced Manufacturing Research Facilities in the Enterprise zone. This development can have some potential for air emissions from various activity and would need to be considered on an individual basis, albeit this is not expected to be significant compared to other types of industry. Similarly, any future development in the Bradfield City Centre need to consider their potential for air quality impacts to ensure that they can comply with the relevant regulatory requirements.

The location of the Enterprise zone is shown in **Figure 15.**

The Advanced Manufacturing Research Precinct has been positioned in the northern portion of the Bradfield City Centre Master Plan and is separated from the residential areas. They would be positioned predominately downwind of these residential areas and would reduce the potential for air quality impacts and minimise the likelihood of land-use conflict.

Greenspaces within the Bradfield City Centre Master Plan would act as buffers between air emission sources and sensitive land uses. Greenspaces also promote good air quality as trees can absorb air pollution and green areas also reduce heat generation that can affect air pollutant transformation.

Figure 15 Location of Enterprise zone



6 Conclusion

This study has examined the potential air quality impacts that may arise associated with the Bradfield City Centre Master Plan.

The key source of air emissions associated with the Bradfield City Centre Master Plan is identified as road traffic emissions and from future development and activity. The Master Plan incorporates a layout which is designed to reduce effects of air emissions from road traffic through position of major transport corridors relative to sensitive uses, promotion of good air flow throughout the Bradfield City Centre and development from the sensitive uses to minimise the potential for land use conflict.

The design of the Bradfield City Centre Master Plan has considered the various air quality objectives in the development control plan for the Western Sydney Aerotropolis and would likely see these objectives being achieved.

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Australian Government (2021)
"National Environment Protection (Ambient Air Quality) Measure", Australian Government, May 2021.

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""Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales", January 2022.

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"Draft Aerotropolis Precinct Plan", NSW Government, November 2020.

NSW Government (2022)
"Western Sydney Aerotropolis Development Control Plan 2022", NSW Government, November 2022.

NSW Government (2023)
"Western Sydney Aerotropolis Precinct Plan", NSW Government, May 2023.

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NSW GOVERNMENT

APPENDIX D

20230913 Noise and Vibration Impact Assessment

Western Parkland City Authority

Bradfield City Centre
Master Plan Application

Noise and Vibration Impact Assessment Report

Prepared by WSP Australia

September 2023

wpca.sydney

NSW GOVERNMENT

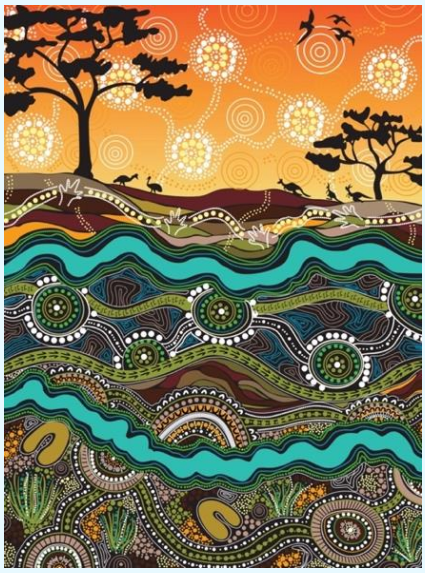
Acknowledgement of Country

Aboriginal people have had a continuous connection with the Country encompassed by the Western Parkland City (the Parkland City) from time immemorial. They have cared for Country and lived in deep alignment with this important landscape, sharing and practicing culture while using it as a space for movement and trade.

We Acknowledge that four groups have primary custodial care obligations for the area: Dharug/Darug, Dharawal/Tharawal, Gundungurra/Gundungara and Darkinjung. We also Acknowledge others who have passed through this Country for trade and care purposes: Coastal Sydney people, Wiradjuri and Yuin.

Western Sydney is home to the highest number of Aboriginal people in any region in Australia. Diverse, strong and connected Aboriginal communities have established their families in this area over generations, even if their connection to Country exists elsewhere. This offers an important opportunity for the future of the Parkland City.

Ensuring that Aboriginal communities, their culture and obligations for Country are considered and promoted will be vital for the future of the Parkland City. A unique opportunity exists to establish a platform for two-way knowledge sharing, to elevate Country and to learn from cultural practices that will create a truly unique and vibrant place for all.



Garungarung Murri Murri Nuru
(Beautiful Grass Country)
Artwork created by Dalmarri artists Jason Douglas and Trevor Eastwood for the Western Parkland City Authority

Version	Status	Date	Prepared By	Reviewer	Comments
Rev 1	For Client Review	18/02/2022	Ben Ison	Tom Krikke	Initial Draft
Rev 2	For Client Review	29/03/2022	Ben Ison	Tom Krikke	Draft Final
Rev 3	For Client Review	11/11/2022	Ben Ison	Rebecca Warren	Draft Final
Rev4	TAP Issue Only	25/11/2022	Ben Ison	Rebecca Warren	Draft Final
Rev 5	For Client Review	14/06/2023	Scott Henley	Ben Ison	Draft Final
Rev 6	Draft Final Submission	21/07/2023	Scott Henley	Ben Ison	Draft Final
Rev 7	Final Submission	2/08/2023	Ben Ison	Max Chipchase	Final
Rev 8	For Publishing	17/08/2023		Jason Azucena	Minor updates
Rev 9	For Publishing	13/09/2023		Jason Azucena	Amendment to Table 1

Executive Summary

WSP have been commissioned by the Western Parkland City Authority (WPCA) to provide high level master planning input relating to potential noise and vibration impacts for the Bradfield City Centre Master Plan.

Land use planning processes provide the most efficient mechanisms to avoid noise-related land-use conflicts. Incorporating best-practice acoustic design in the built environment can help create communities with healthy levels of environmental noise and reduce the risk of adverse environmental noise exposure. A variety of noise and vibration legislation, standards and guidelines exist to ensure that noise is kept in-balance with the social and economic value of industry to NSW, including the *State Environmental Planning Policy (Precincts – Western Parkland City) 2021* (Western Parkland City SEPP) and relevant Development Control Plan.

The Master Plan considers and protects the Future Infrastructure Corridor as identified in the State Environmental Planning Policy (Transport and Infrastructure) 2021. Future developments will be assessed against the relevant EPI's and relevant agency guidelines to demonstrate that the proposal will not result in adverse noise impacts.

A variety of noise and vibration impacts that may potentially impact upon the core precinct have been considered and reviewed within this report. The following key recommendations have been provided:

Maximise the set-back of residential developments from major transport corridors to reduce traffic noise and vibration at residences

Site commercial buildings along major roads to act as noise barriers for more sensitive land uses

Use Crime Prevention Through Environmental Design (CPTED) principles to minimise anti-social behaviour

Maximise the use of soft surfaces and green spaces to reduce noise reflection and associated noise build-up within urban areas

Group similar land uses to avoid acoustic conflicts

Utilise soundscape design, through active (electronic) or passive (natural) means, to promote a more pleasant and coherent environment through spatial planning and urban design. It Is noted that further detail to be undertaken as the Master Plan and development progresses.

An assessment of potential noise and vibration impacts and opportunities for acoustic management and mitigation has been completed for the Masterplan city concept.

This document has considered the Masterplan design and best practice acoustic planning and design principles. Ultimate planning approvals for each development within the core precinct will be assessed and approved on a project by project basis. As such, this report is intended to introduce relevant acoustic legislation in NSW and present planning and design level opportunities for the effective management of noise and vibration within the Bradfield City Centre Master Plan.

Further detailed analysis will be required as more detailed project and design information becomes available to assess the potential noise and vibration impacts. This includes potential road traffic numbers, building designs, etc., and will be undertaken as part of the approvals process for each individual development.

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Glossary of Terms

AS	Australian Standard
Aerotropolis	Western Sydney Aerotropolis
BC Act	Biodiversity Conservation Act 2016
CIV	Capital Investment Value
DA	Development Application
Decibels (dB)	The level of noise is measured objectively using a sound level meter. The range of pressure variations associated with everyday living may span over a range of a million to one. Instead of expressing pressure in this enormous range of unit, it is convenient to condense this range to a logarithmic scale and give it the units of decibels. *20db quiet bedroom at night or recording studio* *30db quiet library or quiet location in the country* *40db living room* *50db typical office space or ambience in the city at night* *60db normal conversational speech* *70db a car passing by* *80db kerbside of a busy road* *90db truck passing by* *100db nightclub* *110db rock band or 2m from a jackhammer* *120db loud construction equipment such as concrete saw or hydraulic rock breaker* *130db threshold of pain* *140db 25m from a jet aircraft*
dBA: A-weighted decibels	The ear is not as effective in hearing low frequency sounds as it is hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the “a” filter. A sound level measured with this filter switched in is denoted as dB(A). Most environmental noise is measured using the ‘A’ filter.
DP	Deposited Plan
DPE	Department of Planning and Environment
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
Frequency	The time rate for each wave peak (of a sound or vibration wave) to pass a given point. Frequency is measured in Hertz (Hz).
LEP	Local Environmental Plan
LGA	Local Government Area

Loudness	A 3db increase represents a doubling of the sound pressure, however an increase of about 10db is required before the sound will subjectively appear to be twice as loud. That is, a sound of 85db is twice as loud as a sound of 75db which is twice as loud as a sound of 65db and so on. The smallest change which can be readily heard is approximately 2db. An increase beyond 5db is considered to represent the level at which a change in loudness begins to be clearly perceived.
NSW Government	State Government for NSW
Resonance	The reinforcement or prolongation of sound or vibration by the synchronous vibration of a neighbouring object.
Resonance frequency	A frequency at which resonance occurs.
SEPP	State Environmental Planning Policy
Structure-borne noise	Vibration propagating through solid structures in the form of compression or bending waves, heard as sound.

References

Ref	Title	Author	Date
1	Interim Construction Noise Guideline	Department of Environment and Climate Change	2009
2	Noise Policy for Industry	*EPA*	2017
3	NSW Road Noise Policy	Department of Environment, Climate Change and Water	2011
4	Rail Infrastructure Noise Guideline	EPA	2013
5	Assessing Vibration: a technical guideline	Department of Environment and Conservation	2006
6	Development near rail corridors and busy roads – Interim guideline	Department of Planning and Environment	2008
7	NSW State Environmental Planning Policy	NSW Government	2021
8	Western Sydney Aerotropolis Development Control Plan – Phase 2	Western Sydney Planning Partnership	2022
9	SEPP (Precincts – Western Parkland City) 2021	Department of Planning and Environment	2021
10	Western Sydney Aerotropolis Plan	NSW State Government	2020
11	Western Sydney Aerotropolis Precinct Plan	Department of Planning and Environment	2023
12	Australian Standard 2021: Acoustics – Aircraft noise intrusion – Building siting and construction	Australian Standards	2015
13	Australian / New Zealand Standard 2107: Acoustics – Recommended design sound levels and reverberation times for building interiors	Australian / New Zealand Standards	2016
14	Apartment Design Guide, Tools for improving the design of residential apartment development	Department of Planning and Environment	2015

1 Introduction

1.1 Purpose of this report

This report accompanies the Master Plan Application for the Bradfield City Centre submitted to the Department of Planning and Environment (DPE).

It considers potential noise and vibration sources within the project area, assesses their potential impacts and provides recommendations and mitigation to minimise any potential land use conflicts.

All matters were considered to have been adequately addressed within the Master Plan Application or in the accompanying appendices.

1.2 The Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,200-hectare region set to become Sydney's third city (the Western Parkland City), and the gateway and economic powerhouse of Western Sydney.

The Aerotropolis comprises of the new Western Sydney (Nancy-Bird Walton) International Airport surrounded by five initial precincts which include the Aerotropolis Core, Wianamatta – South Creek Northern Gateway, Agri-business and Badgerys Creek outlined in **Figure 1** below.

The final Aerotropolis planning package, including the Precinct Plan and State Environmental Planning Policy (SEPP) Amendment, was gazetted by DPE in March 2022 and the Development Control Plan Phase 2 was finalised in November 2022. These documents have been used to inform the preparation of the Bradfield City Centre Master Plan.

The proposed Master Plan Application for the site has also been prepared using the Western Sydney Aerotropolis Master Plan Guideline and Master Plan Requirements.

2 Bradfield City Centre

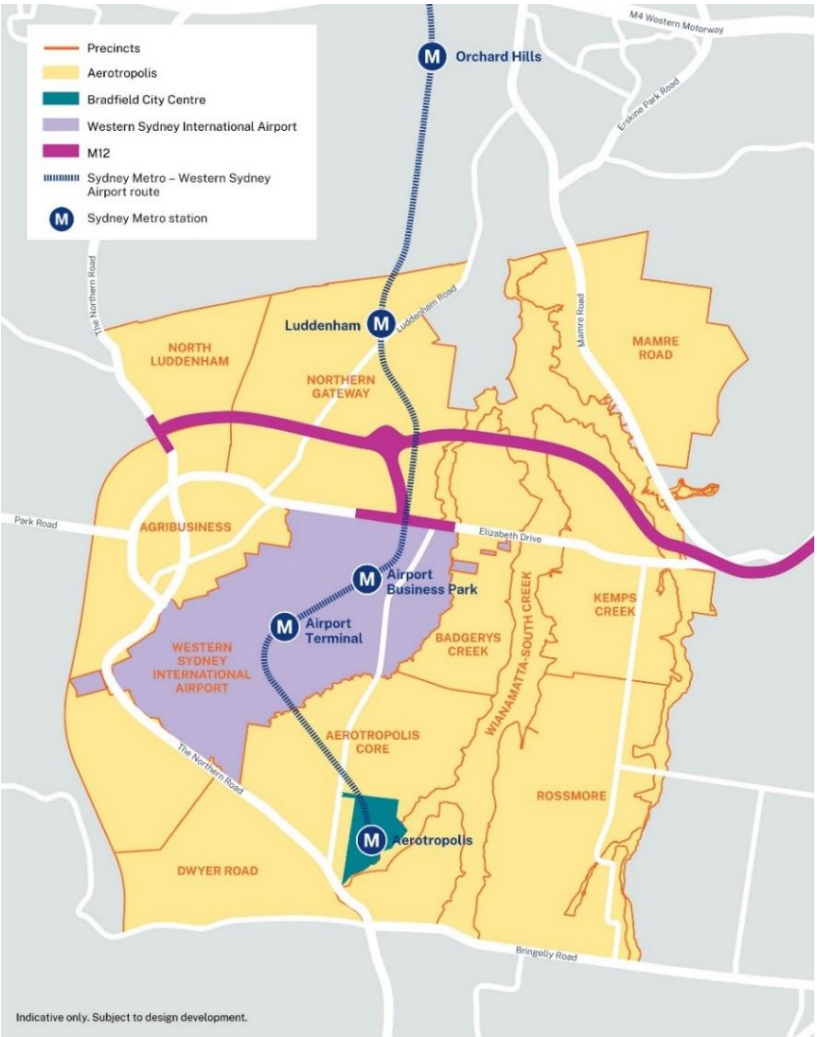
2.1 Strategic Context

The Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and The Northern Road (see **Figure 1** below).

The Sydney Metro Western Sydney Airport line runs through the site, providing connections from the key centre of St Marys through to stations at Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis which is located within the site. Separate from the Metro, there is a Major Infrastructure Corridor which provides provision for future potential rail infrastructure.

The site is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and The Northern Road.

Figure 1 Strategic Context



Set on natural waterways, Bradfield City Centre presents a rare opportunity to showcase the best urban design and to create a thriving, blue and green, connected City in which Australians will want to live, learn and work. The Bradfield City Centre will be a beautiful and sustainable 22nd Century City. It will foster the innovation, industry and technology needed to sustain the broader Aerotropolis and fast track economic prosperity across the Western Parkland City.

2.2 The Master Plan Site

The street address for Bradfield City Centre is 215 Badgerys Creek Road, Bradfield (the Site) within the Liverpool Council Local Government Area (LGA). The site is legally described as Lot 3101 DP 1282964 and has an area of 114.6 hectares, with road access to Badgerys Creek Road located at the north-western corner. The site spans across the Aerotropolis Core and Wianamatta-South Creek Precinct, within Western Sydney Aerotropolis. The Site is outlined in

Figure 2 below.

The Site is predominantly zoned Mixed Use under the Western Parkland City SEPP, with a small portion of Enterprise zoned land located on the north-western corner of the site. The site also includes Environment and Recreation zoned land mostly along Thompson Creek.

Figure 2 Master Plan Site

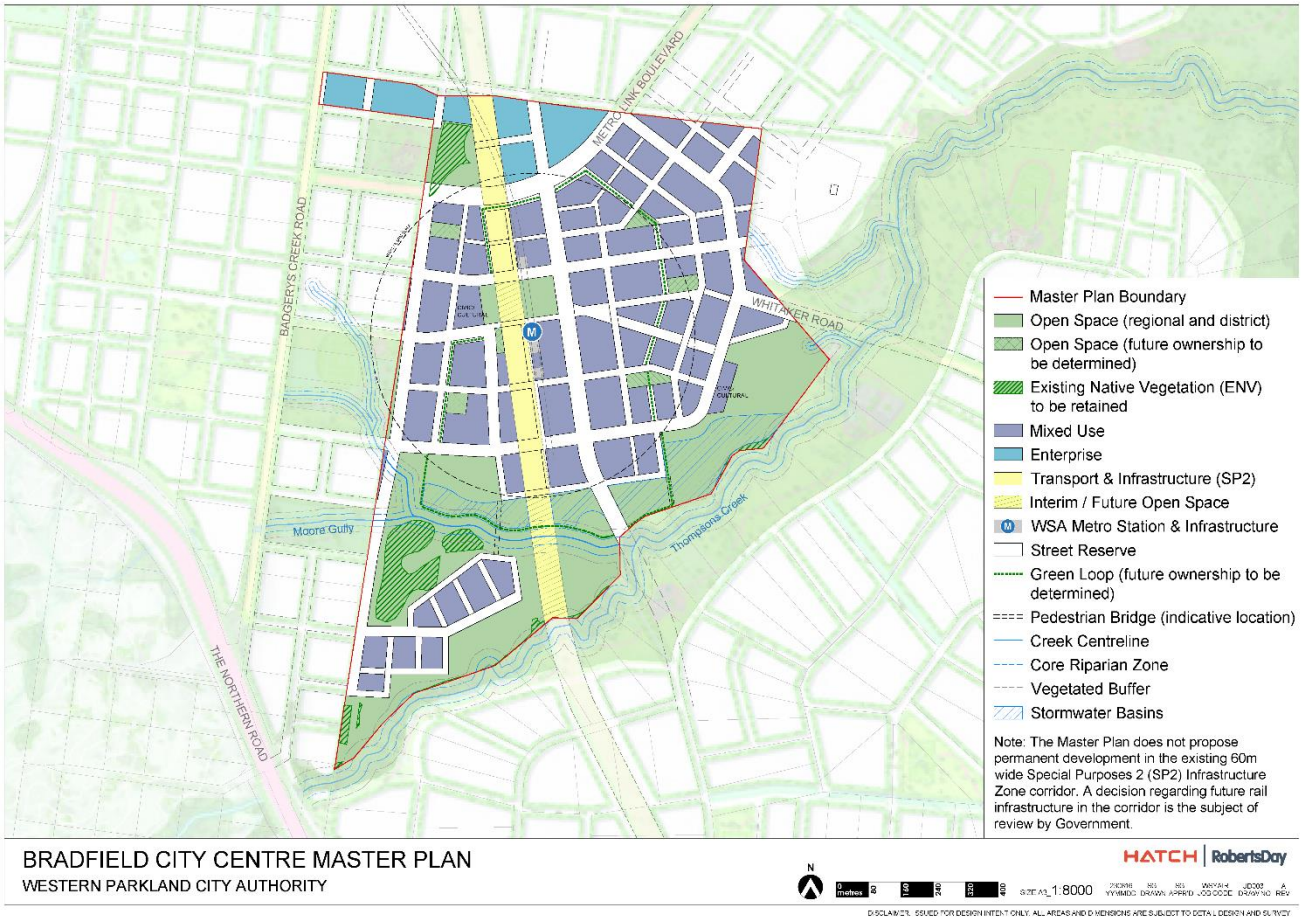
2.3 The Bradfield City Centre Master Plan

The Western Parkland City Authority has prepared a Master Plan (Figure 4 below) in accordance with the DPE Master Plan Requirements.

The Master Plan sets out a framework for future development within the Bradfield City Centre which includes:

- Road network, key connectors to adjoining land and the regional road network (existing and future)
- Block structure
- Indicative open space network
- Sustainability strategy
- Social and infrastructure strategy
- Arts and culture strategy
- Infrastructure servicing strategy

Figure 3 Master Plan



2.4 The Proposal

The Bradfield City Centre Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons for technical assessments.

Table 1 - Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500 sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000 sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

3 Baseline investigations

This section outlines the main considerations within Stage 1 of the Bradfield City Centre Masterplan for the management of noise and vibration.

3.1 Technical baseline site consideration

A variety of noise and vibration sensitive receivers are proposed within the Stage 1 precinct. The proposed areas for these sites are presented in **Figure 3** and may include:

- Residential properties (including retirement homes)
- Educational facilities (including libraries and childcare facilities)
- Medical and research facilities
- Hotels / accommodation
- Open space (active and passive recreational areas)
- Community centres
- Offices, commercial, industrial premises
- Highly vibration sensitive receivers such as medical or electronic facilities

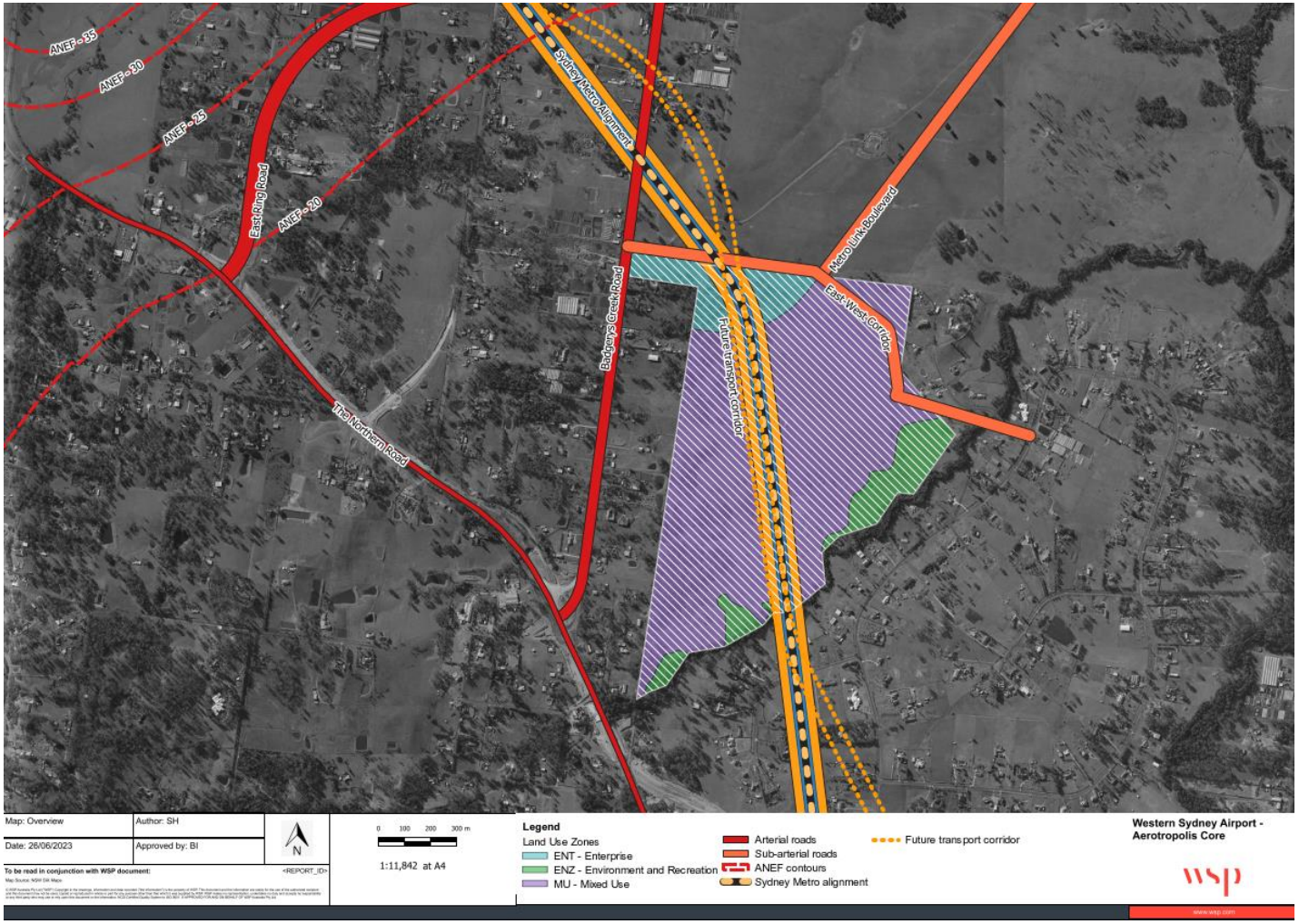
The receiver types will be known at detailed design and assessed against the relevant noise objectives at DA. Any future development is to comply with the Rail Infrastructure Noise Guidelines.

3.2 Area of Focus

The Stage 1 and the wider Bradfield City Centre area are potentially impacted by a range of regional and local noise sources. The primary external noise sources that may impact receivers within the precinct are presented in Figure 4 and include:

- Western Sydney (Nancy-Bird Walton) Airport
- Take-off and landing / Fly-overs
- Arterial and sub arterial roads including:
    - The Northern Road
    - Eastern Ring Road
    - East - West connection
- Sydney Metro – Western Sydney Airport (including stations and service facilities)
- Future Transport corridors
- Local roads / car parks
- Entertainment / active recreational areas

Figure 4 Overview of the Bradfield Precinct and external major noise and vibration sources (source: WSP Australia, 2022)



4 Assessment Requirements and Policy Context

4.1 Master Plan Requirements

The DPE have issued Master Plan Requirements (MPRs) to the Authority for the preparation of a Master Plan for Bradfield City Centre. This report has been prepared to address the following MPRs.

Table 2 - Master Plan Requirements

Reference	Master Plan Requirement	Where addressed
18	Noise and vibration The Master Plan must include a noise and vibration assessment, prepared in accordance with the relevant Environment Protection Authority guidelines, detailing any noise and vibration impacts on sensitive receivers within the Master Plan site and surrounding area, and outline any required management and mitigation measures.	Section 6
Part B – dot point #2	• Noise and vibration assessment (prepared by a suitably qualified person and in line with policies and guidelines).	Whole Report

4.2 National and State Government Plans/Policies

No National Plans or Policies apply to this development.

The following state policies apply to the management of noise and vibration impacts within and arising from, this development.

Table 3 – Relevant State noise policies

Acoustic Aspect	Description	Guideline
Airborne noise	Assessment of road noise	*NSW Road Noise Policy* (DECCW, 2011)
	Assessment of industrial noise	*NSW Noise Policy for Industry* (EPA, 2017)
	Assessment of transport and infrastructure noise	*NSW State Environmental Planning Policy (Transport and Infrastructure)* (NSW Government, 2021)

4.3 Western Sydney Aerotropolis

4.3.1 Western Sydney Aerotropolis Development Control Plan Phase 2

Noise generation can be expected within any urban area, and it is important that impacts are managed appropriately to ensure that sensitive uses have high levels of amenity and employment uses can continue to operate without undue restrictions. The Western Sydney Aerotropolis Development Control Plan – Phase 2 (Western Sydney Planning Partnership, 2022) (Aerotropolis DCP Phase 2) provides controls to guide the preparation of Master Plans and Development Applications.

Performance outcomes relevant to noise and vibration have been outlined in each subject matter section of the Aerotropolis DCP Phase 2 and are replicated below in Table 5.

Table 4 – Aerotropolis DCP performance outcomes

Numeric Section	Subject matter	Performance outcome	Benchmark solution	Master Plan consideration and comment
2.4.2 O	Native vegetation and biodiversity	Noise and light adjacent, and near, conservation areas does not result in any disturbance to wildlife	… 3. Manage light spill and noise producing activities where wildlife impacts are likely to arise from the proposed development and where development is adjacent to avoided land. Measures shall include appropriate noise treatment barriers along major roads and other light and noise mitigation measures. 4. Ensure that any residual noise impacts on wildlife arising from development are appropriately mitigated.	Land use and site layout within the Masterplan has considered potential noise and vibration generation and impacts on adjoining land uses in accordance with the Aerotropolis DCP Phase 2 and all other relevant guidelines and standards. The assessment of potential impacts is outlined in Section 7 and management / mitigation solutions are presented in Section 8. High level mitigation has been recommended to minimise any potential land use conflicts have been effectively incorporated into Section 7 of this masterplan. These will be delivered and refined through detailed design and future Development
3.3.3 PO1	Building siting and design. Landscape setbacks	To provide functional areas of planting that enhance the presentation of a building, provide amenity, cooling and shade, and contribute to overall streetscape character.	…6. Developments adjoining existing sensitive receivers (e.g. educational establishments) shall be designed to mitigate impacts on sensitive receivers such as through generous buffer zones and landscaping, and locating noise generating activities away from the sensitive interface, as well as traffic management measures to improve safety and minimise conflicts…	
2.10.2 PO1	Airport safeguarding	Development within the ANEC 20 and above contours (including extensions to existing development) is constructed to achieve indoor design sound levels as per the Indoor Design Sound Levels for Determination of Aircraft Noise Reduction in AS 2021 – Acoustics Noise Intrusion – Building Siting and Construction.	1. Residential development is constructed in accordance with Table 3 OR 2. An acoustic report is provided which specifies the construction standards required to achieve the specified indoor design sound levels. Note: Residential development within the ANEC 20 and above contours will only be permitted where provided under clause 19(4) of the Aerotropolis SEPP or existing use rights apply. Development of residential accommodation will have the option of either incorporating the specified construction standards or provide an acoustic report. All other noise sensitive development specified within Table 4 of AS2021 will be required to be accompanied by a report prepared by a suitably qualified and experienced acoustic engineer.	

Numeric Section	Subject matter	Performance outcome	Benchmark solution	Master Plan consideration and comment
2.16 O6	Waste management and recovery	Waste management systems minimise negative impacts on the streetscape, public domain, building presentation or amenity of pedestrians, occupants and neighbouring sites.	...2. Collection points and systems are designed to minimise noise for occupants and neighbours during operation and collection.	Applications for each individual project. Land use and site layout within the Masterplan has considered potential noise and vibration generation and impacts on adjoining land uses in accordance with the Aerotropolis DCP Phase 2 and all other relevant guidelines and standards. The assessment of potential impacts is outlined in Section 7 and management / mitigation solutions are presented in Section 8. High level mitigation has been recommended to minimise any potential land use conflicts have been effectively incorporated into Section 7 of this masterplan. These will be delivered
3.7 PO1	Noise and Amenity	To ensure noise and vibration do not adversely impact human health and amenity. To ensure building design adequately protects workers and surrounding receivers from noise and vibration.	1. Any machinery or activity considered to produce noise emissions from a premise shall be adequately sound-proofed so that noise emissions are in accordance with the provisions of the Protection of the Environment Operations Act 1997. 2. Noise should be assessed in accordance with Noise Policy for Industry (EPA, 2017) and NSW Road Noise Policy (Department of Environment, Climate Change and Water, 2011). 3. An Acoustic Report by a qualified acoustical engineer must be submitted where proposed development, including traffic generated by that development, will create noise and/or vibration impacts, either during construction or operation, that impacts on adjoining developments or nearby rural-residential areas. The Acoustic Report NOVEMBER 2022 | Aerotropolis Phase 2 DCP | 70 Performance Outcome Benchmark Solution should outline the proposed noise amelioration strategies and management methods. 4. Acoustic Reports for individual developments must assess cumulative noise impacts, including likely future noise emissions from the development and operation of the Precinct. The consultant should liaise with the relevant	

Numeric Section	Subject matter	Performance outcome	Benchmark solution	Master Plan consideration and comment
			consent authority to determine acceptable amenity goals for individual industrial developments and background noise levels. 5. The use of mechanical plant and equipment may be restricted in areas close to sensitive receivers, such as adjoining rural-residential development and educational establishments. 6. Building design is to incorporate noise amelioration features. Roof elements are to control potential breakout noise, having regard to surrounding topography. 7. Boundary fences are to incorporate noise amelioration features and control breakout noise having regard to developments adjoining rural-residential areas	and refined through detailed design and future Development Applications for each individual project. Land use and site layout within the Masterplan has considered potential noise and vibration generation and impacts on adjoining land uses in accordance with the Aerotropolis DCP Phase 2 and all other relevant guidelines and standards. The assessment of potential impacts is outlined in Section 7 and management / mitigation solutions are presented in Section 8. High level mitigation has been recommended to minimise any potential land use conflicts have been effectively incorporated into Section 7 of this masterplan.
6.2 PO2	Night-time economy uses	Night-time uses are designed to have minimal adverse impacts on the comfort and safety of patrons, nearby residents and the broader community while balancing the choice to reside as part of the urban lifestyle within centres.	... 2. Night-time uses shall include noise mitigation measures to manage any land use conflicts...	
6.3 PO1	Animal boarding or training establishments	Development does not impact the amenity of adjacent neighbours	... 6. An acoustic report demonstrates relevant acoustic measures have been implemented to mitigate noise impact on adjoining properties and the public domain	

Numeric Section	Subject matter	Performance outcome	Benchmark solution	Master Plan consideration and comment
6.4 PO2	Tourist and visitor accommodation	Tourist and visitor accommodation provide adequate amenity for the purpose of short term stays only	... 3. Any noise generating activities and areas that cause exposure to sensitive uses on neighbouring site are restricted between 10pm - 7am.	These will be delivered and refined through detailed design and future Development Applications for each individual project.
Appendix D.28	Noise and vibration reports	-	The following documents (where relevant) must be considered when preparing an acoustic report for submission: a. NSW EPA Noise Policy for Industry (NPfI); b. NSW EPA Noise Guide for Local Government; c. NSW EPA Road Noise Policy; d. NSW Department of Planning, Development Near Rail Corridors and Busy Roads – Interim Guideline; e. NSW Department of Environment and Climate Change, Interim Construction Noise Guideline; and f. All relevant and applicable Australian Standards relating to acoustics and noise generated by different sources (or any subsequent editions of the documents listed above).	Land use and site layout within the Masterplan has considered potential noise and vibration generation and impacts on adjoining land uses in accordance with the Aerotropolis DCP Phase 2 and all other relevant guidelines and standards. The assessment of potential impacts is outlined in Section 7 and management / mitigation solutions are presented in Section 8. High level mitigation has been recommended to minimise any potential land use conflicts have

Numeric Section	Subject matter	Performance outcome	Benchmark solution	Master Plan consideration and comment
				been effectively incorporated into Section 7 of this masterplan. These will be delivered and refined through detailed design and future Development Applications for each individual project.

Future development will be the subject of determination by the consent authority and will require assessment against the relevant EPIs including noise and vibration DCP requirements to ensure measures are put in place to mitigate potential impacts. Detailed assessment will be undertaken which includes noise impacts on sensitive receivers within the city and noise generated from the future development including plant.

4.3.2 Western Parkland City SEPP

The State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (Western Parkland City SEPP) applies to Bradfield. Relevant development controls in the Aerotropolis SEPP have been reproduced below:

(...)

Part 4.3 Development controls — Airport safeguards

4.17 Aircraft noise

(...)

2 Development consent must not be granted to noise sensitive development if the development is to be located on land that is in an ANEF or ANEC contour of 20 or greater.

(...)

4 Despite subclause (2), development consent may be granted to development for the purposes of dwelling houses on land that is in an ANEF or ANEC contour of 20 or greater if —

a immediately before the commencement of this Policy —

i there were no dwellings on the land, and

ii development for the purposes of dwelling houses was permitted on the land, and

b the consent authority is satisfied that the development will meet the indoor design sound levels.

5 Development consent must not be granted to noise sensitive development on the following land unless the consent authority is satisfied the development will meet the indoor design sound levels —

a land shown on the Land Application Map that is not in an ANEF or ANEC contour of 20 or greater,

b land shown on the Obstacle Limitation Surface Map.

(...)

The proposed Master Plan has been developed in accordance with the requirements of this SEPP.

4.3.3 Western Sydney Aerotropolis Plan

The WSAP sets out 11 objectives to shape decision-making across the four themes of the Greater Sydney Region Plan: productivity, sustainability, infrastructure and collaboration, and liveability. These objectives are supported by landscape, urban design and planning principles.

The WSAP outlines a number of requirements that are relevant to reducing noise impacts within the Aerotropolis Core precinct. These are summarised below:

- Safeguard the 24-hour airport
  - Development that will impact upon the aviation operations of the Airport will not be supported. New residential and other noise sensitive development will not be located within the ANEC/ANEF 20 and above contours
- Precinct planning: Aerotropolis Core Precinct
  - Residential communities and other noise sensitive land uses will be located outside the ANEC/ANEF 20 and above contours and within 800 metres or a 10-minute walk of the Metro station.
- Planning Principles:
  - PR8: reduce aircraft noise impacts and prohibit intensification of residential development within the ANEC/ANEF 20 and above contours.

4.3.4 Western Sydney Aerotropolis Precinct Plan

The Precinct Plan provides the place-based objectives and requirements to guide development in the Aerotropolis in a consistent and sustainable manner over time. This Plan sets out the finer grain detail to support the land use zoning and other provisions of the Aerotropolis SEPP.

The following relevant noise objectives and requirements are contained in the Precinct Plan:

- Precinct Vision and Plan Objective
  - Precinct plan 04: Protect Airport operations, including 24-hour operations, and protect future communities from aircraft noise.
- Aerotropolis Core Additional Precinct Objective
  - Additional Precinct Objective 06: Enable residential development as part of a diverse mixed use sub-precinct in areas that are not impacted by airport noise and that benefit from proximity to Wianamatta-South Creek and Thompsons Creek
- Urban Structure - Development adjacent to protected transport corridors
  - Requirement PC1: Development adjacent to corridors identified on the Transport and Infrastructure SEPP and the Aerotropolis SEPP is to be designed to orient noise sensitive elements (for example habitable rooms) away from the noise source.

4.4 Other Relevant Technical Standards

Development Near Rail Corridors and Busy Roads – Interim Guideline (NSW Department of Planning, 2008)

Rail Infrastructure Noise Guideline (NSW Environmental Protection Authority, 2013) (RING)

Assessing Vibration: A Technical Guideline (NSW Department of Environment and Conservation, 2006) (AVaTG)

Australian Standard 2021:2015 Acoustics – Aircraft noise intrusion – Building siting and construction (AS 2021)

Australian / New Zealand Standard 2107:2016 – Acoustics – Recommended design sound levels and reverberation times for building interiors (AS/NZS 2107)

Apartment Design Guide, Tools for improving the design of residential apartment development (NSW Department of Planning and Environment, 2015)

The proposed Master Plan has been developed in accordance with these relevant technical standards.

4.5 Summary of Key Implications for Master Plan

Land use and site layout within the Masterplan will consider potential noise and vibration generation and impacts on adjoining land uses in accordance with the Aerotropolis DCP Phase 2 and all other relevant guidelines and standards.

The assessment will consider potential impacts in accordance with the Protection of the Environment Operations Act 1997 and NSW *Noise Policy for Industry 2017* and other relevant guidelines.

Recommendations and mitigation to minimise any potential land use conflicts will be effectively incorporated into the Masterplan.

Potential construction phase impacts will be considered on a project-by-project basis during the standard planning approvals process.

More detailed assessments will be conducted during the planning approvals process for each individual project.

5 Technical Approach/ Framework

Table 5 provides a high-level summary of the noise and vibration aspects with the potential to impact on future developments within the Masterplan. Sections 6 and 7 provide more detailed assessments of each aspect.

Table 5 – High-level summary of noise and vibration impacts to the Bradfield Masterplan

Acoustic Aspect	Description	Guideline	
Technical Assessment			
Aircraft noise	Sleep disturbance from 24/7 airport operations or fly-overs	Low	Due to the large separation distance, any noise impact on residences is considered to be minimal and outside the control of master planning.
Major Roads	Noise impact from Badgerys Creek Road and The Northern Road.	Medium	Ensure fit-for-purpose developments along major transport corridors. Use commercial buildings sited along major roads to act as a noise barrier.
Sydney Metro	Noise emissions from patrons and building services around the Station precinct. Anti-social behaviour also a risk.	Medium-low	Ensure fit-for-purpose development located immediately adjacent to metro station
Future Rail Corridor	Unclear at this stage	Low-High	Ensure fit-for-purpose development along major transport corridors.

Acoustic Aspect	Description	Guideline	
Noise Impacts from Within the Precinct			
(Major) Roads Within the Precinct	Noise impact from the proposed East-West and North-South spines.	Medium	Ensure fit-for-purpose development along major transport corridors. Use commercial buildings sited along major roads to act as a noise barrier.
Car Parking	Short term noise from car doors, engines and speed control devices. Anti-social behaviour also a risk within car parks.	Medium	Use CPTED to minimise anti-social behaviour
Entertainment Noise/ Activity Areas	Night-time noise from entertainment venues resulting in sleep disturbance to residences. Anti-social behaviour also a risk.	Medium	Create activity (noisy) zones and quiet zones
Vibration Impacts into The Precinct			
Sydney Metro	Ground-borne noise and vibration impacts to residences and commercial venues with vibration sensitive equipment (e.g., laboratories, robotics, etc.). It is noted that encroaching development can be designed for the level of impact expected and the requirement of such development to be built fit-for-purpose.	High	Future developments will be assessed against the relevant EPI's to ensure measures are put in place to mitigate potential impacts
Future Rail Corridor		Low-High	

6 Technical Assessment

6.1 External Noise Impacts into the Precinct

6.1.1 Aircraft noise

Australian Standard 2021:2015 Acoustics – Aircraft noise intrusion – Building siting and construction (AS 2021) provides guidance on assessing the suitability of a building type in relation to an airport through the use of Australian Noise Exposure Forecast (ANEF) contours. The ANEF is defined as '*a single number index for predicting the cumulative exposure of aircraft noise in communities near aerodromes during a specified time period (normally one year)*'.

AS 2021 states that areas outside the ANEF 20 contour are acceptable for all types of development and that there is typically no need for the building construction to provide protection specifically against aircraft noise. However, it does not imply that aircraft noise will be unnoticeable in areas outside the ANEF 20 or that noise impacts are not possible.

The Bradfield precinct is located approximately 5 km away from the runways of the future Western Sydney Airport. The final flight paths and therefore ANEF contours have yet to be finalised, however preliminary studies and the location of the Bradfield precinct indicate that it will be located outside the ANEF 20 contour.

Take-off and Landing

WSP has conducted a high-level aircraft noise assessment for take-off and landing in accordance with the methodology described in AS 2021**.** The expected maximum noise level is from a Boeing 777 / 747 departure. This noise level is modelled to be 47 dBA L_{Smax} from the proposed Stage 1 runway (opening 2026). Noise levels for the proposed 2nd runway (around 2050) are modelled to be 52 dBA $L_{Smax.}$

Table 3.3 from AS 2021 provides indoor design sound levels for various building types and activities to assess aircraft noise. For the most sensitive areas, such as residential sleeping areas, an indoor design sound level of 50 dBA is recommended. At these predicted noise levels, based on currently available aircraft noise data, airport departure and arrival operations are unlikely to cause significant impacts at receivers, and standard building constructions are likely to be sufficient to ensure internal noise levels are acceptable to building occupants.

Flyovers

It is noted that the flight paths for the future Western Sydney Airport have not been confirmed at the time of writing this report. Similarly, it is unclear which aircraft will be used at the time of opening the airport. Once the flight paths are finalised, a new Environmental Impact Statement for the Western Sydney Airport will assess potential flight noise impacts in further detail.

Aircraft noise is not expected to generate greatly varying noise impacts across the precinct and therefore does not need to be a major consideration in the master planning of the precinct. Individual developments should be capable of designs that meet all applicable Australian Standards and Guidelines.

6.1.2 Major Roads

Major existing roads that may impact noise levels within the precinct include Badgerys Creek Road and The Northern Road. These impacts will affect noise levels in the west and south of the precinct, particularly at properties directly exposed to the road corridors.

The level of traffic noise generated along a road alignment is dependent upon a variety of factors including traffic speed, traffic composition and the road surface.

Road noise will decrease along the transmission path to the receiver, being primarily affected by distance and screening. In the Aerotropolis precinct, this screening is expected to be provided primarily by buildings along the road corridor and potentially strategic, isolated noise barriers where required.

As traffic studies and designs for the precinct are at a preliminary stage, any assessment of potential road traffic noise impacts must be based on some high-level assumptions. Table 6 presents the assumptions used for the following discussion.

Table 6 – Expected noise levels from road traffic noise external to the precinct

Parameter	Assumption	Notes
Traffic volumes	600 vehicles per lane per hour	This is generally less than the busiest Sydney CBD roads and represents a conservative volume of traffic
Road surface	Dense Graded Asphalt	Typical construction type - no noise correction

Any development within proximity of the corridor will require the applicant to consider relevant EPI's and guidelines to address the noise impacts of the future transport corridors. It is noted that encroaching development can be designed for the level of impact expected and the responsibility of such development to be built fit-for-purpose as proposed and assessed under future DA.

Any future development is to comply with the Rail Infrastructure Noise Guidelines.

In order to minimise potential impacts from road traffic, consideration has been given to the positioning of large buildings along these road alignments to act as passive noise barriers. These structures will reduce the transmission on noise and are expected to minimise the need for further noise mitigation.

It is recommended that further assessment of potential traffic noise impacts be carried out in accordance with the *NSW Road Noise Policy* as further planning and design information becomes available.

6.1.3 Sydney Metro

The Sydney Metro alignment runs through the precinct from the central north to the south of Aerotropolis. The Metro has a tunnel section from the airport business park to the Aerotropolis (Bradfield) and cut-and-cover topology station above previously approved under State Significant Infrastructure 10051.

In addition, noise associated with the Metro station itself may impact surrounding areas. Future development will be assessed against the relevant noise and vibration requirements, ensuring appropriate mitigation measures are implemented to protect the amenity of the surrounding locality.

Land that is to be developed that trigger legislation in the first or second corridor protection reserves will be required to comply with Sydney Metro Corridor Protection Technical Guidelines and demonstrate that their proposal will not adversely impact the Sydney Metro infrastructure. Future development may consider vibration isolation of building foundations which would be the subject of detailed design and future approval.

In order to minimise the effect of these potential impacts, it is recommended that fit-for-purpose development is positioned around the Sydney Metro station. The development should be designed for the level of impact expected and respond to ensure appropriate mitigation is identified and implemented to mitigate potential impacts.

All potential impacts will be assessed by the relevant consent authority during the approval process, ensuring appropriate mitigation measures are implemented to protect the amenity of the surrounding locality.

6.1.4 Future Rail Corridor

An alignment has been identified which may be used for a future rail corridor. The nature of this corridor is not confirmed at this stage.

The Master Plan considers and protects the Future Infrastructure Corridor as identified in the State Environmental Planning Policy (Transport and Infrastructure) 2021.

Future development will be the subject of Development Applications and require assessment against the relevant EPIs to ensure measures are put in place to mitigate potential impacts.

Any building adjacent to rail corridor is to assume elevated rail structures and to be designed to achieve acoustic and vibration attenuation in accordance with the relevant standards.

Any future development is to comply with the Rail Infrastructure Noise Guidelines.

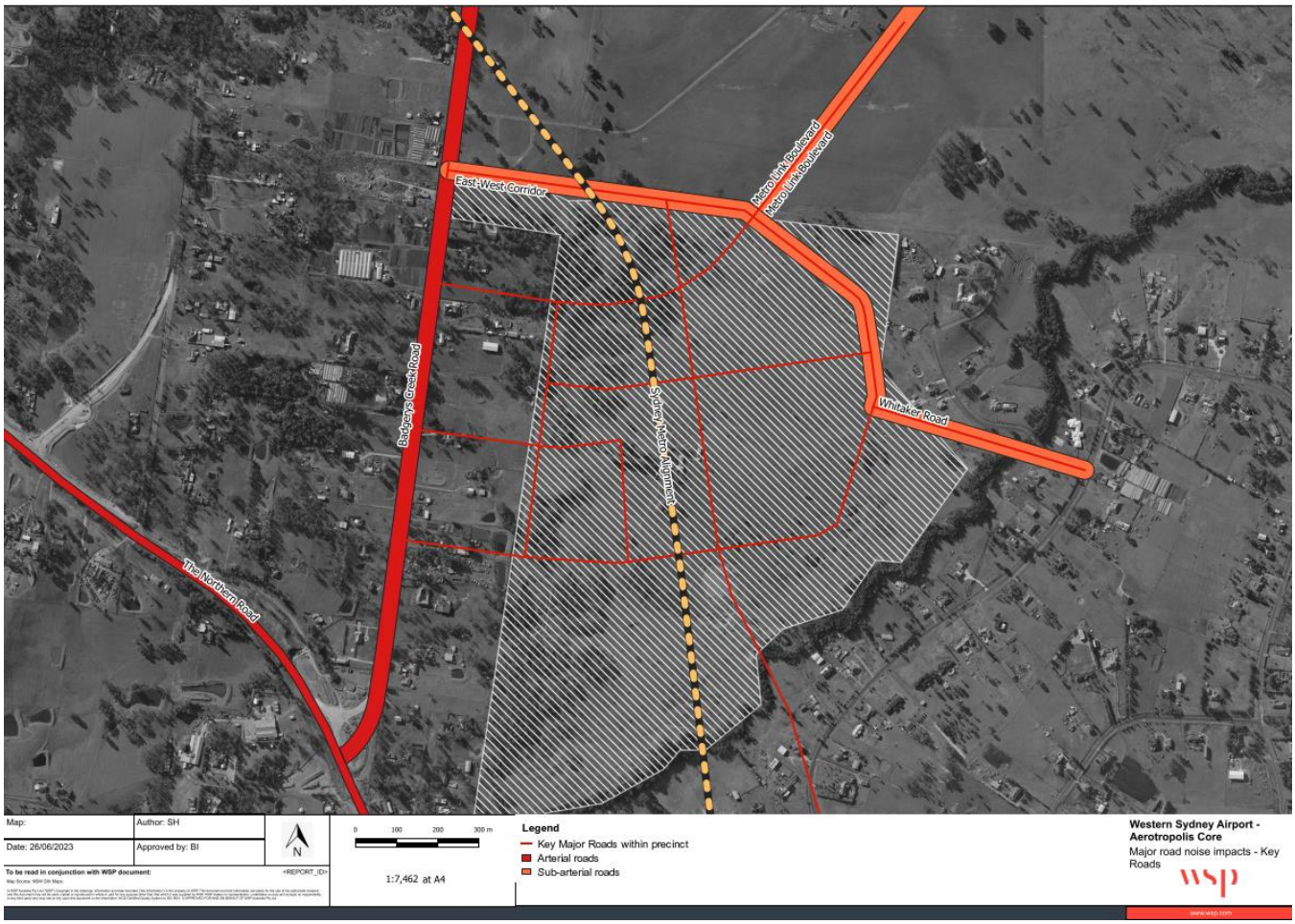
6.2 Noise Impacts from Within the Precinct

6.2.1 (Major) Roads Within the Precinct

The precinct will be serviced by a variety of local and sub arterial roads. As road speed limits and traffic volumes are likely to be substantially lower than those on major roads, any future noise impacts will also be reduced.

Figure 5 presents the current draft Masterplan internal major road network.

Figure 5 Key major roads within the precinct (source: WSP Australia, 2022)



As traffic studies and designs for the precinct are at a preliminary stage, any assessment of potential road traffic noise impacts must be based on some high-level assumptions.

Table 7 presents the assumptions used for the following discussion.

Table 7 – Expected noise levels from road traffic noise within the precinct

Parameter	Assumption	Notes
Traffic volumes	2-300 vehicles per hour (Metro Link Boulevard, Whitakar Road and the Transit Corridor)	This is generally less than the typical Sydney arterial roads and represents a conservative volume
Road surface	Dense Graded Asphalt	Typical construction type - no noise correction

Any development within proximity of the corridor will require the applicant to consider relevant EPI's and guidelines to address the noise impacts of the future transport corridors.

The calculations show that road traffic noise impacts from major roads within the precinct may extend into the site from each road alignment. Within these areas, residential buildings would require architectural noise treatment or the consideration of other noise attenuation. Additionally, natural ventilation may not be suitable for developments within this distance.

In order to minimise these potential impacts, consideration should be given to the positioning of large buildings along these road alignments to act as passive noise barriers. Where this can be done effectively, the need for traditional road noise barriers or acoustic treatment of buildings will be minimised. The Master Plan considers and implements the recommendations through the urban design and built form massing.

It is recommended that further assessment of potential traffic noise impacts be carried out in accordance with the *NSW Road Noise Policy* as further planning and design information becomes available.

6.2.2 Car Parking

Various car parking buildings are proposed around the periphery of the Core. Carparking has the potential for disturbance to adjacent residential areas due to carpark operation noise, but also by anti-social behaviour.

Where possible, 'best practice' crime prevention through environmental design (CPTED) should be implemented in carpark buildings to minimise disturbance to surrounding residential areas.

6.2.3 Entertainment Noise/ Activity Areas

Entertainment noise is typically a major source of complaint in major city entertainment district areas, such as Darlinghurst and Pyrmont (The Star) within the City of Sydney Council area. Local councils with inner city entertainment districts (e.g., City of Sydney and City of Parramatta) are developing their own night-time economy Development Control Plans (DCPs) with noise management measures to be implemented for entertainment venues. A 24-Hour Economy Strategy Summary Statement supports the Master Plan submission, and it is anticipated that WPCA will work with Council to develop the strategy and all entertainment venues would need to comply with the noise targets as part of the NSW Office of Liquor and Gaming Regulation liquor licensing criteria.

Noting the above, there are high level planning measures that should be considered during early master planning stages to avoid unnecessary restrictions on potential future entertainment venues. Considerations for the Bradfield city precinct planning include:

- Locate entertainment venues as far away as practical from residential developments.
- Create activity (noisy) zones and quiet zones. And market this as such to future residents of the area.
- Include measures to minimise the potential for anti-social behaviour via design measures

6.3 Vibration Impacts into The Precinct

6.3.1 Sydney Metro

The potential impacts of ground-borne vibration in buildings fall into three main categories: human comfort, impacts on building contents and structural damage.

Any assessment of areas potentially affected by ground-borne vibration will be based on the methodology detailed in *Development Near Rail Corridors and Busy Roads – Interim Guideline* (Department of Planning, 2008).

In order to minimise the effect of these potential impacts, it is recommended that fit-for-purpose development is positioned around the Sydney Metro corridor. It is noted that the CSIRO and AMRF may contain highly vibration sensitive land uses, however, are located outside of this area. More detailed consideration of potential commercial land uses will be required during the detailed planning of these areas.

Development should be designed for the level of impact expected and respond to ensure appropriate mitigation is identified and implemented to mitigate potential impacts.

It is recommended that further assessment of potential Sydney Metro vibration impacts be carried out in accordance with the *NSW Rail Infrastructure Noise Guideline* as further planning and design information becomes available.

6.3.2 Future Rail Corridor

Any development within proximity of the corridor will require the applicant to consider relevant EPI's and guidelines to address the noise impacts of the future transport corridors.

In order to minimise the effect of these potential impacts, it is recommended that fit-for-purpose development is positioned around the Sydney Metro corridor. It is noted that the CSIRO and AMRF may contain highly vibration sensitive land uses, however, are located outside of this area. More detailed consideration of potential commercial land uses will be required during the detailed planning of these areas.

Any building adjacent to rail corridor is to assume elevated rail structures and to be designed to achieve acoustic and vibration attenuation in accordance with the relevant standards. Future development will be the subject of Development Applications and require assessment against the relevant EPIs to ensure measures are put in place to mitigate potential impacts.

6.4 Summary of identified acoustic impacts

Table 8 summarises the preliminary assessments carried out in this report and any identified noise or vibration impacts.

Table 8 – Summary of identified noise and vibration impacts

Acoustic impact source	Notes
Noise impacts	
Aircraft noise	The site is located outside the preliminary ANEF 20-25 contours and is therefore considered to be suitable for all types of developments.
Major roads	Road traffic noise impacts from The Northern Road and Badgerys Creek Road may extend to areas within the site and impacts managed in accordance with relevant planning policies and guidelines.
Sydney Metro	Noise impacts from the Sydney Metro Aerotropolis Station will be managed during detailed design and considered in assessment of planning approvals. 3.
Future transport corridor	Potential noise impacts from the Future transport corridor are expected to be minimal at this current point in time and will be assessed as part of future planning approvals.
Noise sources within the precinct	

Acoustic impact source	Notes
Major roads within the precinct	Road traffic noise impacts from major roads within the precinct may extend into the site and will be assessed at relevant approval stage.
Car parking	Where noise impacts are considered and assessed during the project design phase, no impacts are predicted.
Entertainment noise / activity areas	Any noise impacts will be managed through building design and operating conditions considered during the development approval and licencing stage for both specific entertainment and residential developments. Detailed Development Control Plans around the night-time economy should be considered by the Authority.
Vibration impacts	
Sydney Metro	Vibration impacts from the Sydney Metro Aerotropolis Station will be managed during detailed design and considered in assessment of planning approvals.
Future transport corridor	

7 Recommendations

7.1 Land use planning

Land use planning processes provide the most efficient mechanism to avoid noise-related land use conflicts. The greenfield nature of the Bradfield city provides a rare opportunity to create a built environment that reduces future land use conflicts and allows the passive management of noise impacts, reducing environmental noise effects and the need for retrofitting noise controls at the receiver.

7.2 Design Considerations

Following the consideration of potential noise and vibration impacts during preliminary and detailed land use planning phases of development, smaller scale noise mitigation and management measures may be implemented to further reduce any residual impacts.

These measures will typically be implemented on a project-by-project basis and considered as part of the noise and vibration assessment process during the planning phase of a development.

It is important that potential noise and vibration impacts from (or into) any development are assessed in accordance with the relevant NSW guidelines during the planning approvals stage of each project, and suitable noise management measures are implemented to control any predicted noise impacts.

These noise and vibration assessments must:

- Be carried out by a competent person as defined in the *Approved Methods for the measurement and analysis of environmental noise in NSW* (EPA, 2022)
- Consider cumulative noise and vibration impacts on receivers, including from noise generating activities being carried out (or to be carried out) both inside and outside the proposed project area as per the *Noise Policy for Industry* (EPA, 2017) (NPfI). The master plan should put in place provisions to ensure that a precinct noise management approach can be implemented as per section 2.4.2 of the NPfI
- Be undertaken in accordance with (as relevant and not limited to):
  - *Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009)
  - *Noise Policy for Industry* (EPA, 2017)
  - *NSW Road Noise Policy* (Department of Environment, Climate Change and Water, 2011)
  - *Rail Infrastructure Noise Guideline* (EPA, 2013)
  - *Assessing Vibration: a technical guideline* (Department of Environment and Conservation, 2006)

– *Development near rail corridors and busy roads – Interim guideline* (DPE, 2008).

The recommendations applicable to Table 10 summarises the recommendations relating to noise and vibration, and applicable timeframes and responsibilities for the project.

Table 9 – Summary of recommendations and responsibilities for the project

Ref	Recommendation	Timeframe	Responsible
Land use planning noise and vibration recommendations			
1	Grouping similar land uses to avoid acoustic conflicts and reduce the risk of noise nuisance	Prior to relevant Master Plan Stage	WPCA
2	Designing green spaces to minimise event and active recreational noise at sensitive receivers	Prior to relevant Master Plan Stage	WPCA
3	The inclusion of water features or other natural sounds to mask unwanted urban noise	Prior to relevant Master Plan Stage	WPCA
4	Ensure fit-for-purpose developments along primary transport routes or adjacent to other major noise sources.	Prior to relevant Master Plan Stage	WPCA
5	Ensure fit-for-purpose developments to avoid impacts at vibration sensitive land uses along major transport routes	Prior to relevant Master Plan Stage	WPCA
6	Locating the rear, or less sensitive, boundaries of lots towards major transport routes or other noise sources	Prior to relevant Master Plan Stage	WPCA

Ref	Recommendation	Timeframe	Responsible
Land use planning noise and vibration recommendations			
7	Parks / urban green spaces provide open space for relaxation, recreation and socialising. They also provide relief from the noise and activity of an urban environment.	Prior to relevant Master Plan Stage	WPCA
8	The needs of vibration sensitive land uses should be considered during planning stages. These premises may be susceptible to vibration generated by the Sydney Metro line.	Prior to relevant Master Plan Stage	WPCA
9	Soundscape design, through active (electronic) or passive (natural) means.	Prior to relevant Master Plan Stage or individual planning approvals	WPCA
10	Adopting the Green Star, WELL or other ESD tools.	Prior to relevant Master Plan Stage	WPCA
Design noise and vibration			
11	Building designs, layouts and constructions, including sound attenuation measures, are to take into account the impacts of noise between the different uses within a building and from surrounding areas.	Prior to individual project planning approval	Relevant Consent Authority
12	Any proposed residential buildings would be required to include a consideration of acoustic treatment to ensure that internal noise levels are in accordance with recommended levels outlined in AS/NZS2107.	Prior to individual project planning approval	Relevant Consent Authority
13	Noise / vibration impacts associated with any future development would be assessed in accordance with the relevant NSW guidelines,	Prior to individual project planning approval	Relevant Consent

Ref	Recommendation	Timeframe	Responsible
Land use planning noise and vibration recommendations			
	and suitable noise management measures would be implemented to control any predicted impacts.		Authority
14	Consider construction noise and ground vibration impacts during planning stages of demolition, remediation and construction.	Prior to individual project planning approval	Relevant Consent Authority
15	Consideration may be given to the creation of a network of soundscapes to generate a coherent, acceptable noise environment. The installation of pleasant noise sources, such as water features throughout the precinct will mask less desirable noise sources such as industry, aircraft and road traffic.	Prior to individual project planning approval	Relevant Consent Authority
16	– The General guidelines and 'good practice' as per the *Development Near Rail Corridors and Busy Roads – Interim Guideline* should be implemented to be used as a minimum requirement for noise mitigation. Available here: https://www.rms.nsw.gov.au/business-industry/partners-suppliers/documents/planning-principles/guideto-infrastructure-development-near-rail-corridors-busy-roads.pdf	Prior to individual project planning approval	Relevant Consent Authority
17	Buildings with concrete/brick/glazed facades and pavements are acoustically reflective. Introduction of 'green' areas/facades and soil in urban areas that scatter noise would result in less noise build up compared to high build up areas (such as the Sydney CBD).	Prior to individual project planning approval	Relevant Consent Authority

8 Conclusion

Land uses and site layouts within the Masterplan have considered potential noise and vibration generation and impacts on adjoining land uses in accordance with the Aerotropolis DCP Phase 2 and all other relevant guidelines and standards.

The assessment considered potential impacts in accordance with the Protection of the Environment Operations Act 1997 and NSW *Noise Policy for Industry 2017* and other relevant guidelines.

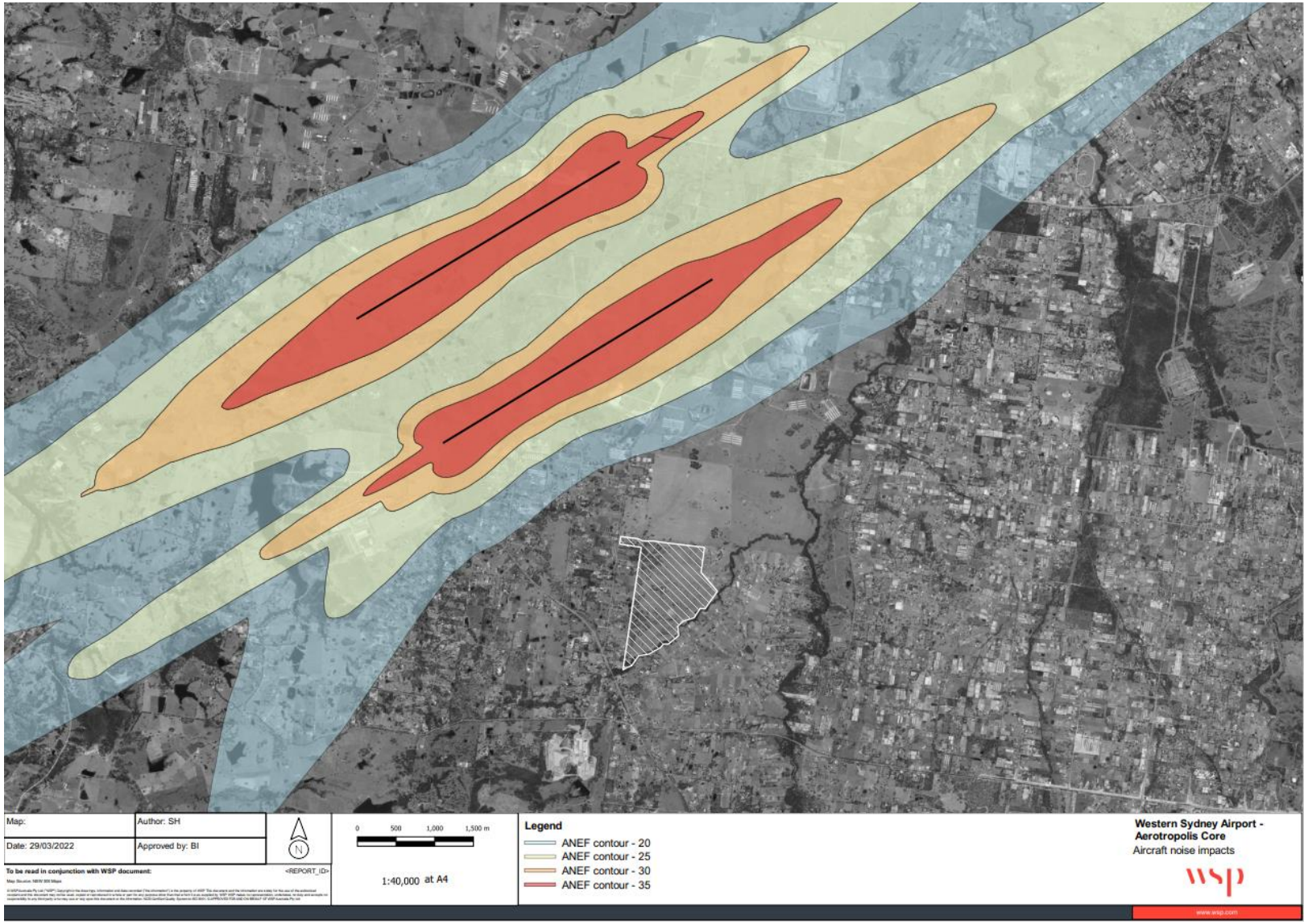
Recommendations and mitigation to minimise any potential land use conflicts have been effectively incorporated into the Masterplan.

Potential construction phase impacts will be considered on a project-by-project basis during the normal planning approvals process.

More detailed assessments will be conducted during the planning approvals process for each individual project. Any future development is to comply with the Rail Infrastructure Noise Guidelines and/ or other relevant NSW noise and vibration guidelines.

Appendix 1 – Aircraft noise impacts

(SOURCE: WSP AUSTRALIA, 2023)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Legend
ANEF contour - 20
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Western Sydney Airport - Aerotropolis Core
Aircraft noise impacts
wsp
www.wsp.com

APPENDIX E

20230913 Statement of Heritage Impact Report

Western Parkland City Authority

Bradfield City Centre
Master Plan Application

Statement of Heritage Impact

Prepared by Extent Heritage

September 2023

wpca.sydney

NSW GOVERNMENT

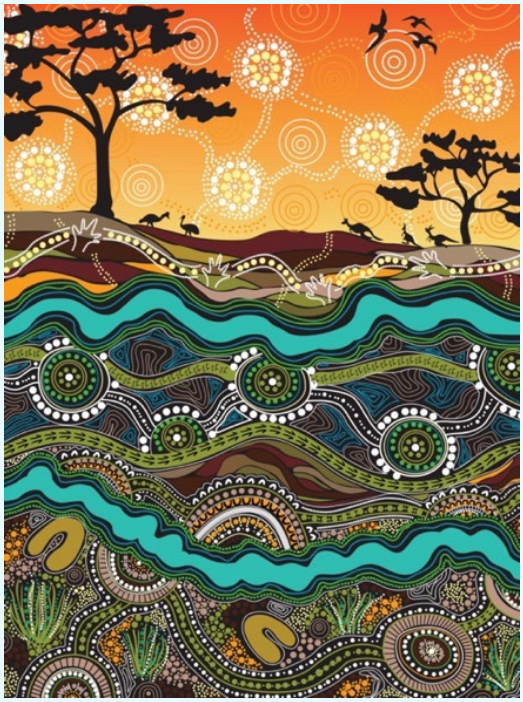
Acknowledgement of Country

Aboriginal people have had a continuous connection with the Country encompassed by the Western Parkland City (the Parkland City) from time immemorial. They have cared for Country and lived in deep alignment with this important landscape, sharing and practicing culture while using it as a space for movement and trade.

We Acknowledge that four groups have primary custodial care obligations for the area: Dharug/Darug, Dharawal/Tharawal, Gundungurra/Gundungara and Darkinjung. We also Acknowledge others who have passed through this Country for trade and care purposes: Coastal Sydney people, Wiradjuri and Yuin.

Western Sydney is home to the highest number of Aboriginal people in any region in Australia. Diverse, strong and connected Aboriginal communities have established their families in this area over generations, even if their connection to Country exists elsewhere. This offers an important opportunity for the future of the Parkland City.

Ensuring that Aboriginal communities, their culture and obligations for Country are considered and promoted will be vital for the future of the Parkland City. A unique opportunity exists to establish a platform for two-way knowledge sharing, to elevate Country and to learn from cultural practices that will create a truly unique and vibrant place for all.



Garungarung Murri Murri Nuru
(Beautiful Grass Country)
Artwork created by Dalmarri artists Jason Douglas and Trevor Eastwood for the Western Parkland City Authority

Version	Status	Date	Prepared By	Reviewer	Comments
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Executive Summary

The Western Parkland City Authority (WPCA) is the NSW Government agency responsible for delivering, coordinating and attracting investment to the Western Parkland City. A key component of the WPCA's work is the delivery of the Bradfield City Centre. The Authority has been granted permission by the NSW Department of Planning and Environment (DPE) to prepare a master plan for the Bradfield City Centre.

Extent Heritage Pty Ltd have been commissioned by the Western Parkland City Authority (WPCA) to provide a Statement of Heritage Impact for the Bradfield City Centre Master Plan. This report addresses the impacts of the Master Plan to non-Aboriginal heritage. The overarching aim of the Master Plan is to develop the study area into the Bradfield City Centre. The area is proposed for mixed-use development comprising industrial, commercial, open space and residential uses for a 115-hectare site centred around a new Sydney Metro station. The Master Plan assessed within this report includes four stages of development. The new development, in particular Stage 1, comprises land located within the central and north-west quadrant of the Master Plan Site, centred around the future Sydney Metro Station. Stages 2-4 have not been fully detailed as yet but will involve a major change to land use and will involve the construction of new buildings and infrastructure within the study area.

The assessment of heritage impacts contained within Section 9 of this report has determined that the proposed Master Plan will have a minor adverse impact on the heritage significance of the State listed homestead, Kelvin. The proposed Master Plan will transform a portion of the rural landscape surrounding this heritage item. Although there will be no direct physical or visual impacts associated with this proposal, the proposed changes will have indirect visual impact. The proposed Master Plan will inevitably impact the views west from the homestead and farm outbuildings, as the retained rural qualities of the wider landscape have contributed to the extended visual curtilage of this item, beyond that which is contained in the SHR curtilage. Impacts, however, are limited to land located at the rear of this heritage item and at a suitable distance from key features of significance. The proposed Master Plan will not detract from the significance of the item, as it will remain legible in the landscape as an early nineteenth century homestead and farming complex. Furthermore, key views to north and east will be retained supporting the extended visual curtilage and setting of an item in a semi-rural setting.

This report has determined that the study area is not identified as a heritage item on any statutory or non-statutory registers, nor does it meet the criteria for local or State significance. The proposed works will not directly impact on any identified built heritage. An analysis of historic plans and historical aerial photographs demonstrates that the site was located within a portion of the former estate referred to as The Retreat and subsequently Kelvin and then Kelvin Grove. The estate operated primarily as a grazing property until the early 1950s at which time it was purchased by the Commonwealth and functioned as the RAAF Bringelly Receiving Station. The assessed potential for the presence of archaeological material associated with all post 1788 occupational phases of the site are low within the works footprint. Any surviving remains are likely to have a low archaeological significance.

While the proposed development will significantly modify the existing rural character of the area, the Master Plan is consistent with the planning objectives projected for the area. Several mitigation measures and recommendations have been provided in this report including the planning controls, sensitive building design, use of green spaces and heritage interpretation which provide opportunities to limit the impact of this Master Plan and provide a positive outcome from a heritage perspective. As such, the impacts to heritage are considered acceptable in understanding the positive outcomes of the proposed development for the wider community.

Approval and Notification Requirements

Heritage Act 1977 – As the works will not directly affect any items on the State Heritage Register and there is low potential for impacting on known or expected relics, no notifications, permits or approvals are required in accordance with the Heritage Act.

Environmental Planning and Assessment Act 1979 – This report fulfils the assessment requirements under the EPA Act.

State Environmental Planning Policy (Precincts – Western Parkland City) (Western Parkland City SEPP). – This report fulfils the assessment requirements under this SEPP.

Recommendations

The following recommendations have been developed to mitigate impacts to non-Aboriginal heritage.

- Any new development should consider the SHR heritage item, Kelvin which is located in the immediate vicinity. Consideration should be given to the height, bulk, scale and material of new buildings. Recessive colours, adequate setbacks, the use of open space and landscaping are ways which the impacts to this heritage item can be mitigated. This consideration is important for the Stage 4 area of the Master Plan, which is the closest to the SHR Item (noting not the subject of this Master Plan application).
- It is recommended future development includes a transitional area between the heritage item and new development to ensure development is of a scale and character suitable to the heritage significance of Kelvin. Transitional areas should consider the topography and ensure buildings have a lower FSR and building height to minimise potential adverse impacts arising from overshadowing, scale and massing.
- It is recommended that a Photographic Archival Recording be undertaken for the site prior to any changes being made to record the existing site.
- There is the opportunity to develop a Heritage Interpretation Strategy for this project. This will ensure a holistic approach towards to the interpretation implementation so that the significant values heritage in the vicinity, ranging from various themes including natural, Aboriginal, colonial, and twentieth-century heritage, are appropriately represented and enhance each other cohesively. The Strategy would typically be subject to internal and external consultation to guide the final implementation.
- In regard to the management of historical archaeological remains an Unexpected Finds Procedure should be in place prior to the commencement of ground works (Appendix 1).

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Glossary of Terms

ACHAR	Aboriginal Cultural Heritage Assessment Report
AHMS	Archaeological and Heritage Management Solutions
AS	Australian Standard
Aerotropolis	Western Sydney Aerotropolis
BC Act	Biodiversity Conservation Act 2016
BP	Before present (AD 1950)
CIV	Capital Investment Value
CMP	Conservation Management Plan
CRM	Cultural Resource Management
DA	Development Application
DP	Deposited Plan
DPC	Department of Premier and Cabinet (NSW)
DPE	Department of Planning and Environment
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instruments
ERS	Eastern Regional Sequence
GPS	Global Positioning System
Growth Centre SEPP	State Environmental Planning Policy (Sydney Region Growth Centres) 2006
HCA	Heritage Conservation Area
Heritage Act	Heritage Act 1977 (NSW)
LEP	Local Environmental Plan
LGA	Local Government Area
NHL	National Heritage List

NPW Act	National Parks and Wildlife Act 1974 (NSW)
NSW Government	State Government for NSW
NTSCorp	Native Title Service Corporation
OEH	Office of Environment and Heritage (formerly DECCW, now Heritage NSW-DPC)
SEPP	State Environmental Planning Policy
SEPP (Infrastructure and Transport)	State Environmental Planning Policy (Infrastructure and Transport) 2021
SHI	State Heritage Inventory, NSW
SHR	State Heritage Register
SoHI	Statement of Heritage Impact
WHL	World Heritage List
WPCA	Western Parkland City Authority

1 Introduction

1.1 Purpose of this report

This report accompanies the Master Plan Application for the Bradfield City Centre submitted to the Department of Planning and Environment (DPE). It addresses the non-Aboriginal heritage requirements for the development of the Bradfield City Centre Master Plan within the heart of the Aerotropolis Core Precinct of the broader Western Sydney Aerotropolis.

The Western Parkland City Authority (WPCA) is seeking to secure Master Plan approval for a mixed-use development, comprising industrial, commercial, open space and residential uses for a 115-hectare site centred around a new Sydney Metro station. This will include a Stage 1 Complying Development Code intended to facilitate development of a variety of land uses including commercial, advanced manufacturing, research and development (R&D), innovation, residential, education, retail and recreation uses.

This report has been prepared to address the non-Aboriginal heritage within the study area and specifically to respond to the relevant Secretary's Master Plan Requirements. The technical report addresses the impacts to built heritage and non-Aboriginal Archaeology and provides relevant information to ensure all considerations are appropriately identified and assessed. The following sections introduce the site, context, and nature of the Bradfield City Centre Master Plan.

All matters were considered to have been adequately addressed within the Master Plan Application or in the accompanying appendices.

1.2 The Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,200-hectare region set to become Sydney's third city (the Western Parkland City), and the gateway and economic powerhouse of Western Sydney.

The Aerotropolis comprises of the new Western Sydney (Nancy-Bird Walton) International Airport surrounded by five initial precincts which include the Aerotropolis Core, Wianamatta– South Creek Northern Gateway, Agri-business and Badgerys Creek outlined in **Figure 1** below.

The final Aerotropolis planning package, including the Precinct Plan and State Environmental Planning Policy (SEPP) Amendment, was gazetted by DPE in March 2022 and the Development Control Plan Phase 2 was finalised in November 2022. These documents have been used to inform the preparation of the Bradfield City Centre Master Plan.

The proposed Master Plan Application for the site has also been prepared using the Western Sydney Aerotropolis Master Plan Guideline and Master Plan Requirements.

1.3 Approach and methodology

The methodology used in the preparation of this Statement of Heritage Impact (SOHI) is in accordance with the principles and definitions as set out in the guidelines to *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (the Burra Charter)* (Australia ICOMOS 2013) and the latest version of the *Statement of Heritage Impact Guidelines* (Heritage Office and Department of Urban Affairs and Planning 2002), produced by the former NSW Office of Environment and Heritage (now the Department of Planning and Environment).

This SOHI will review the relevant statutory heritage controls, assess the impact of the proposal on the subject property and make recommendations as to the level of impact.

1.4 Limitations

The site was inspected and photographed by Hannah Morris on 18 October 2021. The inspection was undertaken as a visual study only.

The historical overview provides sufficient historical background to provide an understanding of the place in order to assess the significance and provide relevant recommendations, however, it is not intended as an exhaustive history of the site.

This assessment does not include an assessment of Aboriginal heritage. For information on Aboriginal cultural heritage, please refer to the separate report:

- Bradfield City Centre – Aboriginal Cultural Heritage Assessment Report in preparation by Extent Heritage (October 2021).
- Bradfield City Centre – Master Plan – Aboriginal Archaeological Test Excavation Report (ATER) in preparation by Extent Heritage (February 2022)

1.5 Authorship

The following staff members at Extent Heritage have prepared this statement of heritage impact:

- Hannah Morris, Senior Heritage Advisor,
- Kim Watson, Senior Heritage Advisor, and
- Gabrielle Harrington, Heritage Advisor.

This report was reviewed by Dr MacLaren North, NSW Director.

1.6 Terminology

The terminology in this report follows definitions presented in the Burra Charter (Australia ICOMOS 2013). Article 1 provides the following definitions:

- **Place** means a geographically defined area. It may include elements, objects, spaces and views. Place may have tangible and intangible dimensions.
- **Cultural significance** means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations,

meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.

- **Fabric** means all the physical material of the place including elements, fixtures, contents and objects.
- **Conservation** means all the processes of looking after a place so as to retain its cultural significance.
- **Maintenance** means the continuous protective care of a place, and its setting. Maintenance is to be distinguished from repair which involves restoration or reconstruction.
- **Preservation** means maintaining a place in its existing state and retarding deterioration.
- **Restoration** means returning a place to a known earlier state by removing accretions or by reassembling existing elements without the introduction of new material.
- **Reconstruction** means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material.
- **Adaptation** means changing a place to suit the existing use or a proposed use.
- **Use** means the functions of a place, including the activities and traditional and customary practices that may occur at the place or are dependent on the place.
- **Compatible use** means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.
- **Setting** means the immediate and extended environment of a place that is part of or contributes to its cultural significance and distinctive character.
- **Related place** means a place that contributes to the cultural significance of another place.
- **Related object** means an object that contributes to the cultural significance of a place but is not at the place.
- **Associations** mean the connections that exist between people and a place.
- **Meanings** denote what a place signifies, indicates, evokes or expresses to people.
- **Interpretation** means all the ways of presenting the cultural significance of a place.

2 Bradfield City Centre

2.1 Strategic Context

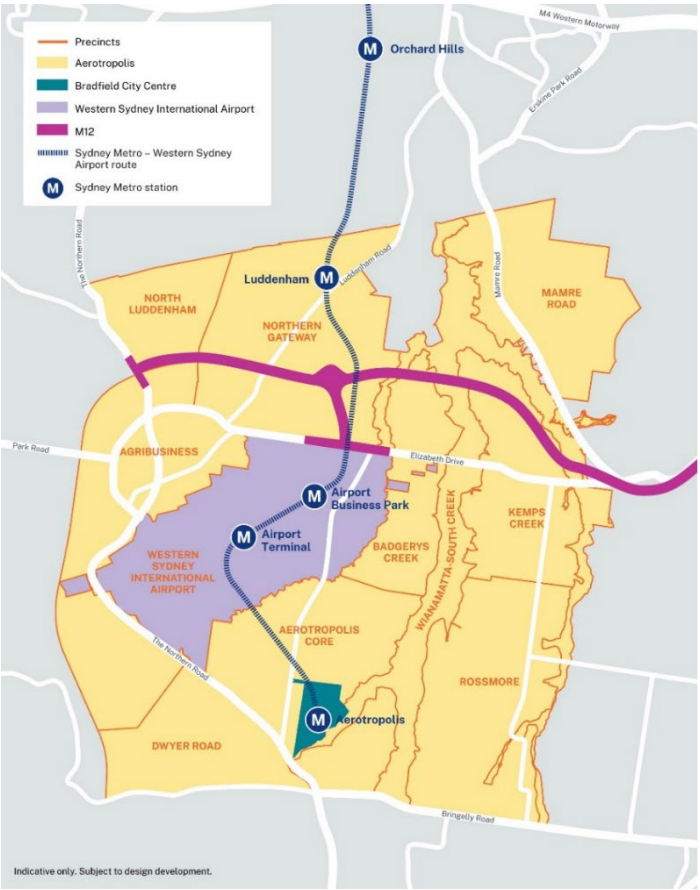
The Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and The Northern Road (see **Figure 1** below).

The Sydney Metro Western Sydney Airport line runs through the site, providing connections from the key centre of St Marys through to stations at Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis which is located within the site.

The site is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and The Northern Road.

Set on natural waterways, Bradfield City Centre presents a rare opportunity to showcase the best urban design and to create a thriving, blue and green, connected City in which Australians will want to live, learn and work. The Bradfield City Centre will be a beautiful and sustainable 22nd Century City. It will foster the innovation, industry and technology needed to sustain the broader Aerotropolis and fast track economic prosperity across the Western Parkland City.

Figure 1. Strategic Context



2.2 The Master Plan Site

The street address for Bradfield City Centre is 215 Badgerys Creek Road, Bradfield (the Site) within the Liverpool Council Local Government Area (LGA). The site is legally described as Lot 101 DP 1282949 and has an area of 114.6 hectares, with road access to Badgerys Creek Road located at the north-western corner. The site spans across the Aerotropolis Core and Wianamatta-South Creek Precinct, within Western Sydney Aerotropolis. The Site is outlined in **Figure 2** below.

The Site is predominantly zoned Mixed Use under the Western Parkland City SEPP, with a small portion of Enterprise zoned land located on the north-western corner of the site. The site also includes Environment and Recreation zoned land mostly along Thompsons Creek.

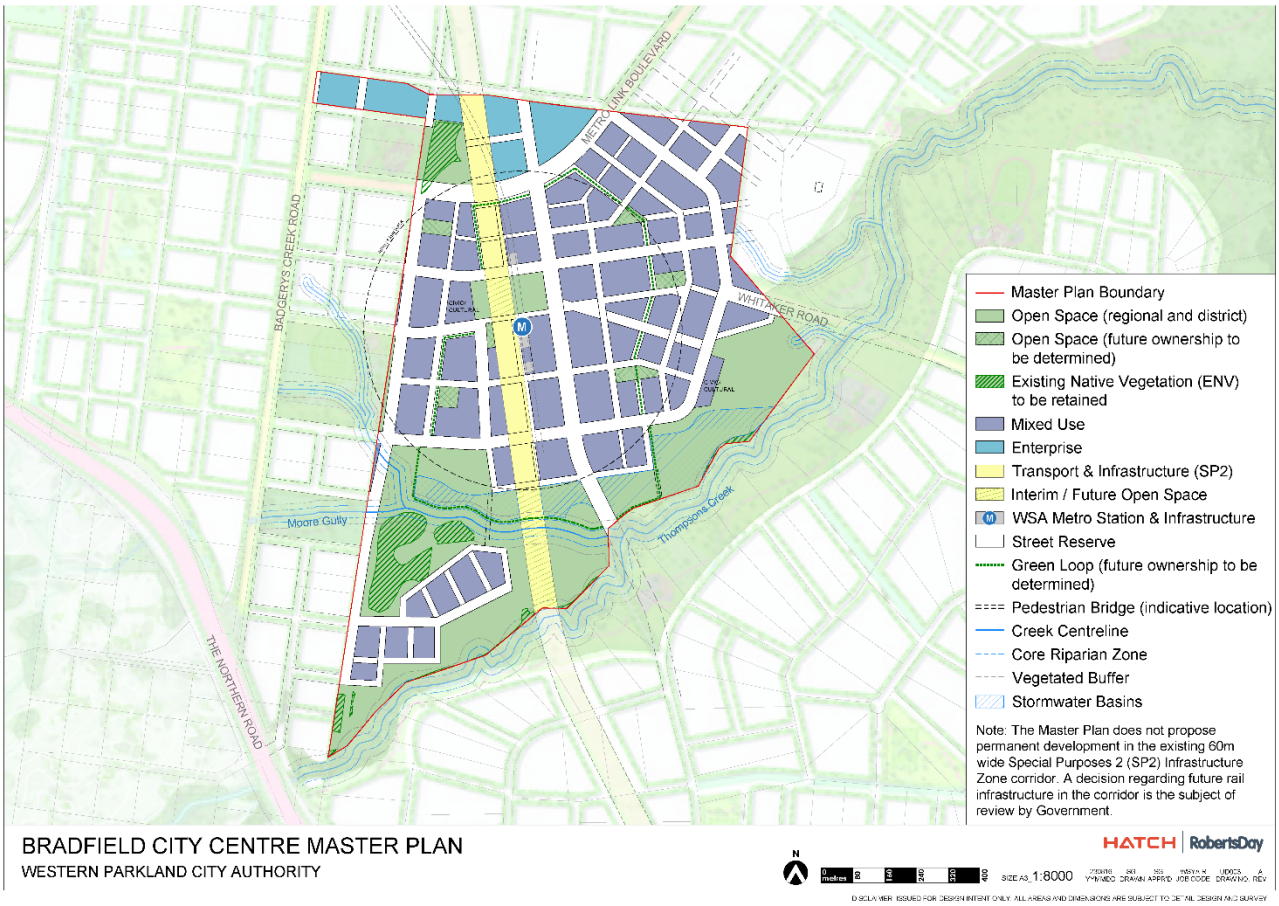
Figure 2. Master Plan Site

2.3 The Bradfield City Centre Master Plan

The Western Parkland City Authority has prepared a Master Plan (**Figure 3** below) in accordance with the DPE Master Plan Requirements. The Master Plan sets out a framework for future development within the Bradfield City Centre which includes:

- Road network, key connectors to adjoining land and the regional road network (existing and future)
- Block structure
- Indicative open space network
- Sustainability strategy
- Social and infrastructure strategy
- Arts and culture strategy
- Infrastructure servicing strategy

Figure 3. Master Plan



2.4 The Proposal

The Bradfield City Centre Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons for technical assessments.

Table 1. Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500 sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000 sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

3 Planning context

3.1 Heritage status

Within the study area, there are no heritage items identified on any statutory or non-statutory heritage registers. The following table outlines the heritage status of the study area.

Table 2. Summary of heritage status

Register	Item listed (Y/N)	Item name	Item number
Statutory listings			
World Heritage List	N	-	-
National Heritage List	N	-	-
Commonwealth Heritage List	N	-	-
State Heritage Register	N	-	-
State Environmental Planning Policy (Precincts—Western Parkland City) 2021	N	-	-
Non-statutory registers			
Register of the National Trust (NSW)	N	-	-

3.2 Heritage in the vicinity

A review of relevant statutory heritage registers has identified four (4) heritage items in the vicinity of the study area. Two are identified State heritage items on the State Heritage Register, and two are identified local heritage items under Schedule 5 of their respective Local Environmental Plans. The following table summarises the heritage in the vicinity of the study area.

Table 3. Summary of heritage items in the vicinity of the study area

Item name	Address	Register	Significance level	Item number
Bringelly Public School Group, including schoolhouse and former headmaster's residence	101 Wentworth Road, Bringelly	Schedule 5, Liverpool LEP 2008	Local	7
Cottage	1186 The Northern Road, Bringelly	Schedule 5, Camden LEP 2010	Local	I2
Kelvin	30 The Retreat, Bringelly	State Heritage Register	State	00046
		Schedule 2 Environmental heritage – Western Sydney Aerotropolis, State Environmental Planning Policy (Precincts – Western Parkland City) 2021	State	I3
Church of the Holy Innocent	130 Rossmore Avenue, West Rossmore	State Heritage Register	State	02005
		Schedule 5, Liverpool LEP 2008	State	60

Figure 4. Map showing heritage items in the vicinity of the study area.

4 Historical context

4.1 Introduction

This historical context relies largely on the compilation of primary and secondary historical resources, as well as detailed analysis of historical plans and aerial images. This history has been adapted from the *Bradfield City Centre First Building: Statement of Heritage Impact* prepared by Extent Heritage (2022) for Western Parkland City Authority.

4.2 Aboriginal occupation pre-1788

Aboriginal people have lived in the area known as NSW for at least 45,000 years (NPWS 2003, 14). To date, more than thirty-eight (38) Aboriginal language groups (previously referred to as 'tribes') have been identified within NSW (NPWS 2003, 14). Some examples of this broader cultural-linguistic groups in NSW include the Darug (alternative spellings include 'Dharug,' 'Dharuk' and 'Dharook'), Darkinjung, Gandangara (also spelled as 'Gundungarra'), Tharawal (also referred to as 'Dharawal'), Kuringai, and Awabakal (Attenbrow 2010, 23, 32). Since the 1970s, archaeologists and anthropologists working in the Sydney region have largely adopted the nomenclature for cultural-linguistic groups compiled by Capell (1970) and amended by Eades (1976) (Attenbrow 2010). Based on this research, the study area is considered to have been occupied by Darug-speaking clans.

Generally, the Darug people thought to have lived in clan-based bands of around fifty members each. Each clan retained its own hunting district and moved through Country seasonally (Murray and White 1988). The inland clans, in particular, are also thought to have moved more often according to the season, with summer attracting large numbers of clans to the land around the Nepean and Hawkesbury Rivers, and winter dispersing these clans over the plain and into the mountains (Kohen and Lampert 1987, 357).

4.3 British exploration 1788-1804

Following the arrival of the First Fleet in 1788, life changed irreversibly for the Darug after the invasion of their lands. Theft of Country, dispossession, alienation from resources, violence, and disease became a reality of life for Aboriginal people in the Sydney Region, shaping this next chapter of history profoundly.

The Aboriginal people of the broader Sydney basin who did survive the disease and violence wrought by colonisation were increasingly forced to live on the fringes of colonial society. With limited access to resources, they also became necessarily dependent on the state (see NSW Legislative Council 1845), and therefore subjected to increasing levels of government control. Government allocations of blankets and slop clothing, and the bartering of fish and game for sugar, flour and alcohol also reflect the changes that occurred in Aboriginal economies and lifeways at this time.

In spite of the devastation caused in this period, it is critical to note that while many of their kin had either perished or been forced away from their traditional lands, there are records of Aboriginal people who remained on Country throughout the nineteenth century. Campaigns of resistance were central to this survival and records of them across the broader Western Sydney region illustrate Aboriginal people's experiences of this period.

The rapid expansion of British settlement in the Cumberland Plains from the early nineteenth century led to increasing violence between colonists and Aboriginal people in the region. Between 1814 and 1816, tensions rose dramatically as a result of drought and the increasing numbers of Europeans moving to the area. This encroachment restricted Aboriginal people's access to Country and also resources. The violence escalated, culminating on 17 April 1816 in what is referred to as the Appin Massacre (located 35 km south of the study area). Although these events of conflict did not occur within the study area, they are important in demonstrating the Aboriginal experience of European settlement in Australia.

4.4 Early settlement of the Bringelly District (1805-1850)

The Nepean district was first explored by Europeans approximately a decade before they returned to settle permanently in the area. In 1788, Governor Arthur Phillip led parties to explore the outlying regions of Sydney. From a rise near the present Pennant Hills, Governor Phillip first observed the Blue Mountains and the southern portion of the Lansdowne Hills. From the rise of these mountains, he had no doubt a large river would be found, although at the time this search proved unsuccessful (Murray and White 1988).

In June 1789, Captain Watkin Tench (the marine in charge of the new outpost at Rose Hill) led an expeditionary party to the banks of the Nepean River, 'through a country untrodden before by a European foot' (Power 1983 in RMS 2016, 21). In 1791, Tench undertook a second exploratory journey nearby the study area travelling from Prospect Hill in a south-southwest direction towards the upper Nepean. The course of his outward journey took him through the lowland near the junction of South Creek and Kemps Creek, and then through Bringelly. His return route was east through what is now Leppington and Hoxton Park.

In 1795, Henry Hacking investigated the region of the Upper Nepean to confirm reports locating cattle that had escaped from Sydney Cove in 1788. Hacking's journey south took his party along the line of Tench's return route. The presence of the cattle led to the area being named the Cowpastures. The Cowpastures stretched north to Bringelly Road, east to Wilton Road (through Appin), south to the Stonequarry Creek catchment, and west to Burragorang Valley.

Former convict John Warby received 50 acres at Prospect and in 1803 was appointed stockman of the wild cattle at the Cowpastures. Warby appears to have created a track from Prospect to the Cowpastures. The track passed through country described as the Devil's Back and established the main route for the movement of Europeans between Parramatta and the Camden district, later formalised as the Cowpasture Road.

The area surrounding the study area remained relatively undisturbed until 1805 and 1806 at which time the initial surveys for land grants along South Creek were undertaken by James Meehan. The district was named Bringelly. The first grants of 1805 included 680 acres to Nicholas Bayly, 300 acres to Richard Fitzgerald, and 300 acres to Ezekiel Wood. All were located near the junction of South Creek and Badgerys Creek. During the next five years Meehan would lay out further grants for Anthony Fenn Kemp (Mt Vernon) and John Driver (200 acres) adjacent to Kemps Creek. All these early grants were within 5 km of Cowpasture Road, the only road in the district.

During the interregnum between Bligh's and Macquarie's administration, Colonel Paterson (the interim Governor) granted land to almost every person who asked him (Macmillan 1967). Paterson granted in total 67,000 acres of land to different people. These grants were not affirmed until Governor Macquarie's administration and accounts for why Macquarie's affirmed grants were in excess of 2,200 acres and were backdated to the first day of his administration (1 January 1810). These grants, which were potentially granted by Paterson and affirmed by Macquarie were located in the Badgerys Creek Precinct and the Wianamatta-South Creek Precinct, with frontages to South Creek, Kemps Creek, and Badgerys Creek

It was not until 1818 that land was first granted within the present-day suburb of Bringelly. Charles Reid, Thomas Laycock, and Penelope Lucas were granted land on 26 November 1818. William Hutchinson was granted land on 30 June 1823. The majority of the study area was utilised for agricultural activities undertaken by Laycock Junior and subsequent landowners including John Thomas Campbell and Alfred Kennerley. These activities most likely revolved around cattle breeding. Campbell, for example, was a successful farmer and pastoralist who bred cattle and horses. The southern portion of the study was part of land 600 acres of land

granted to Charles Reid on 26 November 1818. His holding was known as “Cottage Grove”.

During the mid-to-late 1820s, several grants including Charles Reid’s (at the southern end of the study area) were absorbed and consolidated to create large estates held in the main by absentee landholders. Darcy Wentworth increased his 2,500-acre holdings by absorbing the adjoining properties of Ellis Bent, William Gore, John Piper, John Palmer (Jr), and Mary Birch. At the time of his death in 1827, his Bringelly holdings consisted of 8,515 acres.

By 1821, the Northern Road (‘Bringelly’ road) had been formed connecting the Camden district with Richmond (Sydney Gazette 15 September 1821, 1). This road also crossed the great Western Road in the north providing access to Penrith and St Marys.

A building complex associated with Thomas Laycock’s pastoral estate was constructed during his ownership is the property now known as Kelvin Park (Figure 2). Buildings and structures associated with this Kelvin Park homestead are located outside the study area to the north-east. This includes the main farm complex and homestead. The complex is one of the most important, and only surviving examples of, this type of estate. The site was originally a 600-acre grant made to Thomas Laycock (Jr) on 26 November 1818 and known initially as ‘Cottage Vale’. The adjoining 600-acre grant to the south was made out to Charles Reid on the same date and referred to as ‘Cottage Grove’. Laycock absorbed the Reid property, and the consolidated estate was known as ‘The Retreat’ (HLRV Primary Application No. 769). Laycock unexpectedly died in 1823 and in 1824, the estate was sold to Edward Riley and acquired by Provost Marshal John Thomas Campbell one month later. The property was described in *The Australian* as:

Retreat contains 1200 acres, is all enclosed, has 200 acres and upwards (constituting a beautiful lawn) cleared and fenced in; the remainder of the estate is also divided into several paddocks. On this estate there is a handsome and roomy residence, fit for the immediate reception of a gentleman's family (*The Australian* 1824, 2).

Following Campbell’s purchase of the property he subsequently leased the property to the Australian Agricultural Company in 1825. Campbell died in 1830 and in 1837 the property was purchased by Alfred Kennerley from Campbell’s heir. The estate remained in the hands of the Kennerley family until 1853 at which time Kennerley returned briefly to England.

The early land grants are shown in **Figure 5** and described in **Table 4**.

Figure 5. Early land grants within the Aerotropolis Core Precinct.
Note: Approximate location of the study area (red).
Source: Extent Heritage 2021.

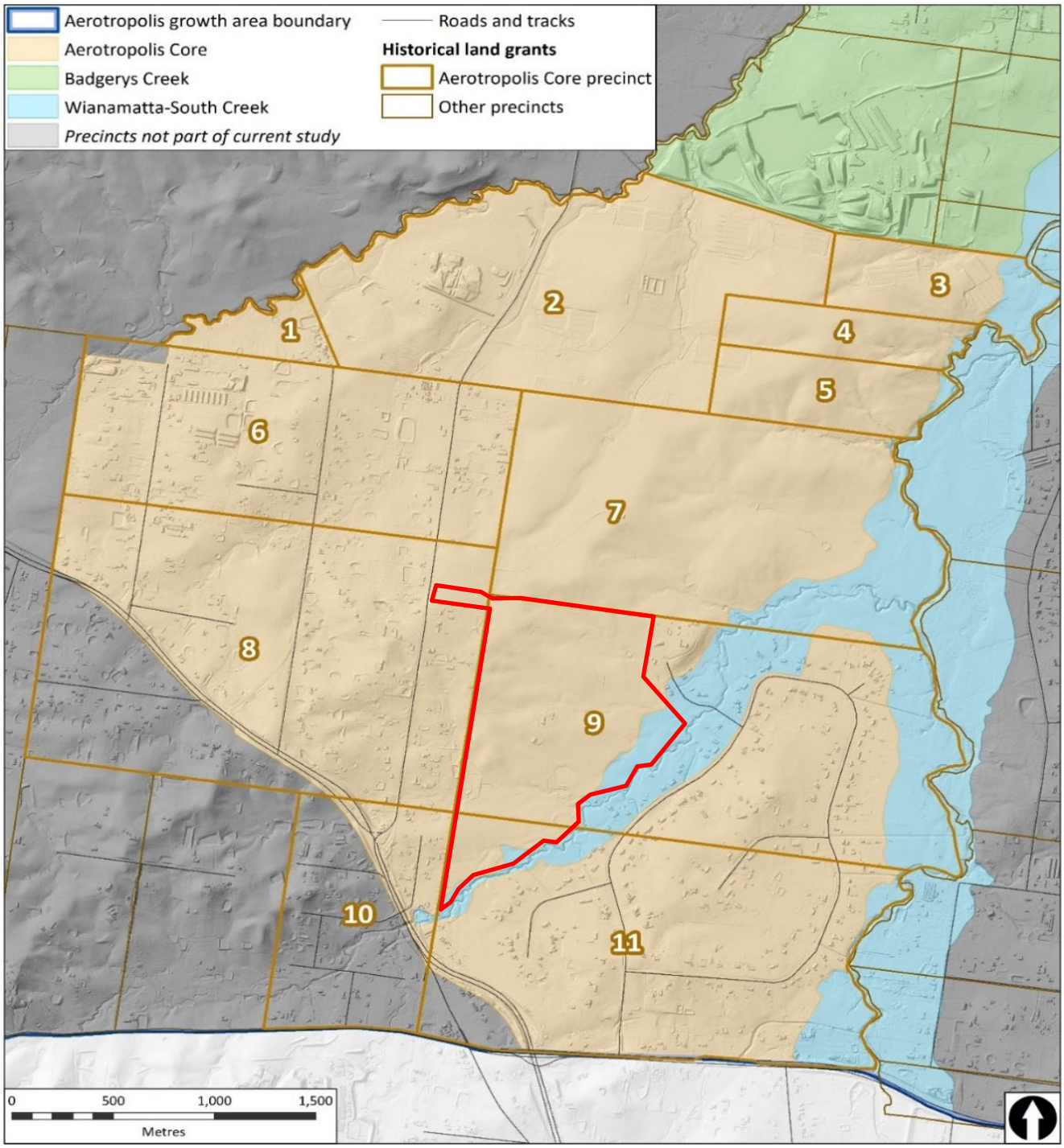


Table 4. Description of early land grants within the Aerotropolis Core Precinct

No	Grantee	Area (acres)	Parish	Portion	Date of grant	Estate name
1	William White	40	Bringelly	36	11 Sep 1817	
2	Michael Robinson	500	Bringelly	35	11 Sep 1817	*St Aubyns*
3	Gustavus A Low	100	Bringelly	26	11 Sep 1817	*Low Brook*
4	Matthew Hughes	65	Bringelly	25	8 Oct 1816	
5	William Hayes	100	Bringelly	24	12 Mar 1818	*Bally-hayes*
6	Edward Wright	350	Bringelly	16	5 Apr 1821	
7	Penelope Lucas	500	Bringelly	23	26 Nov 1818	*Lucas Farm*
8	William Hutchinson	700	Bringelly	17	30 Jun 1823	
9	Thomas Laycock	600	Bringelly	22	26 Nov 1818	*Cottage Vale*
10	William Hutchinson	220	Bringelly	20	13 Nov 1818	
11	Charles Reid	600	Bringelly	21	26 Nov 1818	*Cottage Grove*

Figure 6. Kelvin Park, main homestead with outbuildings visible in the rear, looking north.
Source: Extent Heritage 2020.

Figure 7. Detail of Plan of the allotments of ground, granted from the Crown in New South Wales.
The Bringelly land district is pink (marked 'X'), north at top. Approximate location of study area (red).
Source: J. Burr & G. Ballisat. Burr, J.: London, 1814 SLNSW Z/Cb 81/6

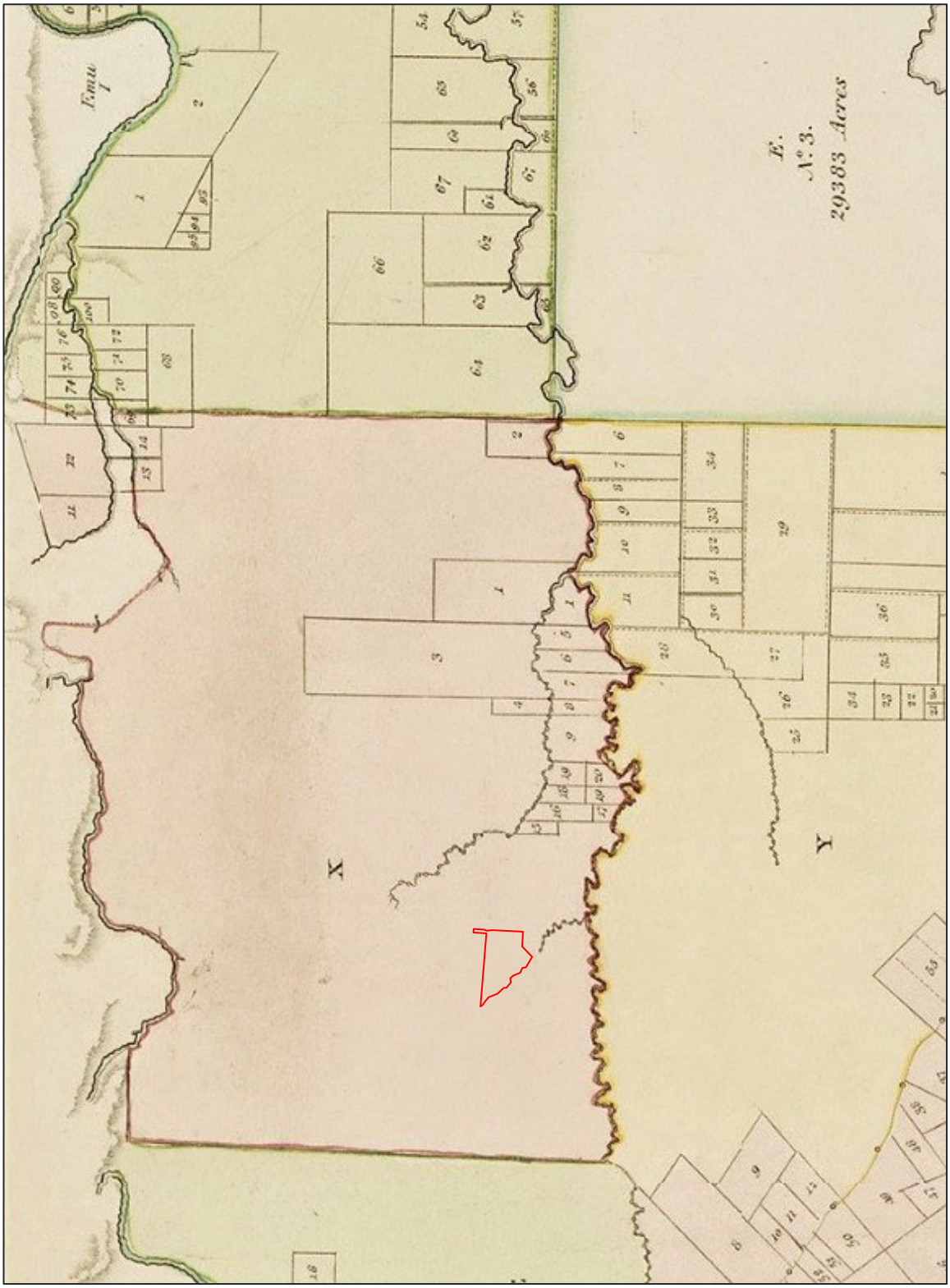
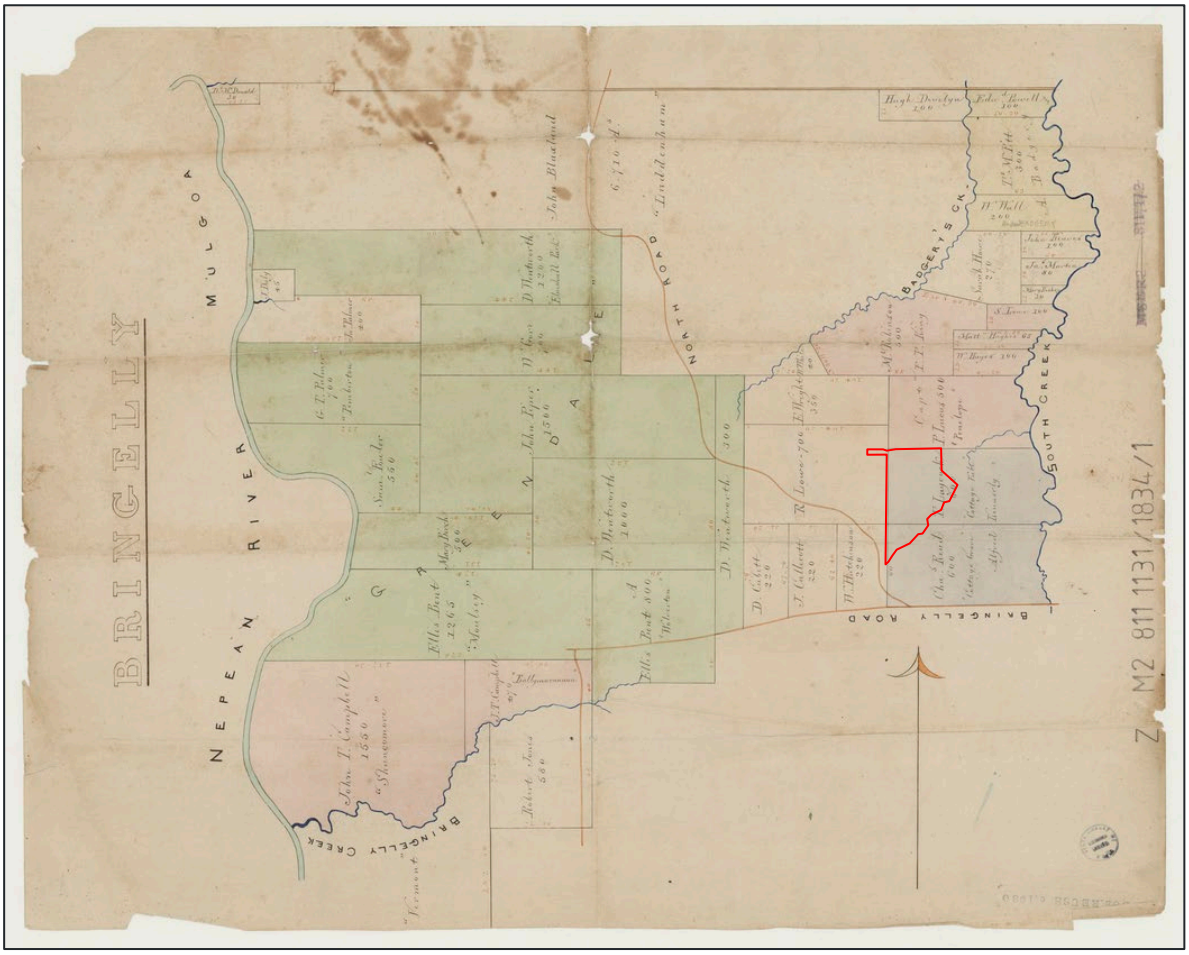


Figure 8. Parish of Bringelly 1834. Approximate location of study area (red).
Source: SLNSW MZ 811.1131/1834/1



The late 1830s and early 1840s saw a convergence of factors that resulted in a decline in the viability of many large estates. The end of transportation, with the resulting loss of cheap labour and severe drought between 1838 and 1840, resulted in extensive crop failures. Falling wool prices contributed to an economic depression during the 1840s. This depression saw capitalists who had borrowed heavily in the 1830s, in order to purchase land, unable to service their debts. Some owners of larger estates sought relief by providing tenancies. The configurations of the tenancies were generally ad hoc in nature.

Most of the large holdings in the Bringelly district survived into the second half of the nineteenth century intact. These included William Hutchinson's 'Hutchinsonian Farm' that was noted for bloodstock breeding. There was no village of Bringelly during this period.

4.5 Nineteenth century subdivision (1850-1900)

During the second half of the nineteenth century many of the large landholders within the study area struggled to maintain their properties as viable concerns. Most grazing properties ceased sheep breeding and moved to agistment and fattening of cattle. There were several attempts to promote the district for dairying, but this form of agricultural pursuit required good pasture and a reliable water supply, both of which were absent. The larger estates that did survive the economic difficulties of the 1840s relied in great part on tenancies. The tenancies were usually small family farms that relied primarily on stock raising. The only form of stock-raising that held any promise was horse breeding.

Bringelly had the potential to develop as a regional service town. It was located at the intersection of The

Northern Road and Bringelly Road. It was however encircled by the 'Hutchinsonian Estate' that remained in private hands until the 1880s. For much of the later nineteenth century the estate lay fallow resulting in significant regrowth. Portions of the estate were cleared, and the property was subdivided and put up for sale. The initial sale failed, and the property was resurveyed and subdivided. It was placed on the market in 1892. By this stage Bringelly had a post office (on The Northern Road, north of Bringelly Road) and a public school. This subdivision was only partially successful, and few lots were taken up. The village of Bringelly failed to develop.

Figure 9. Cowpasture Farms, in 7 and 10-acre blocks, 1892.
This subdivision developed from William Hutchinson's land grant, immediately west of Thomas Laycock's grant (the study area.)
Source: SLNSW DSM/Q981.2/B

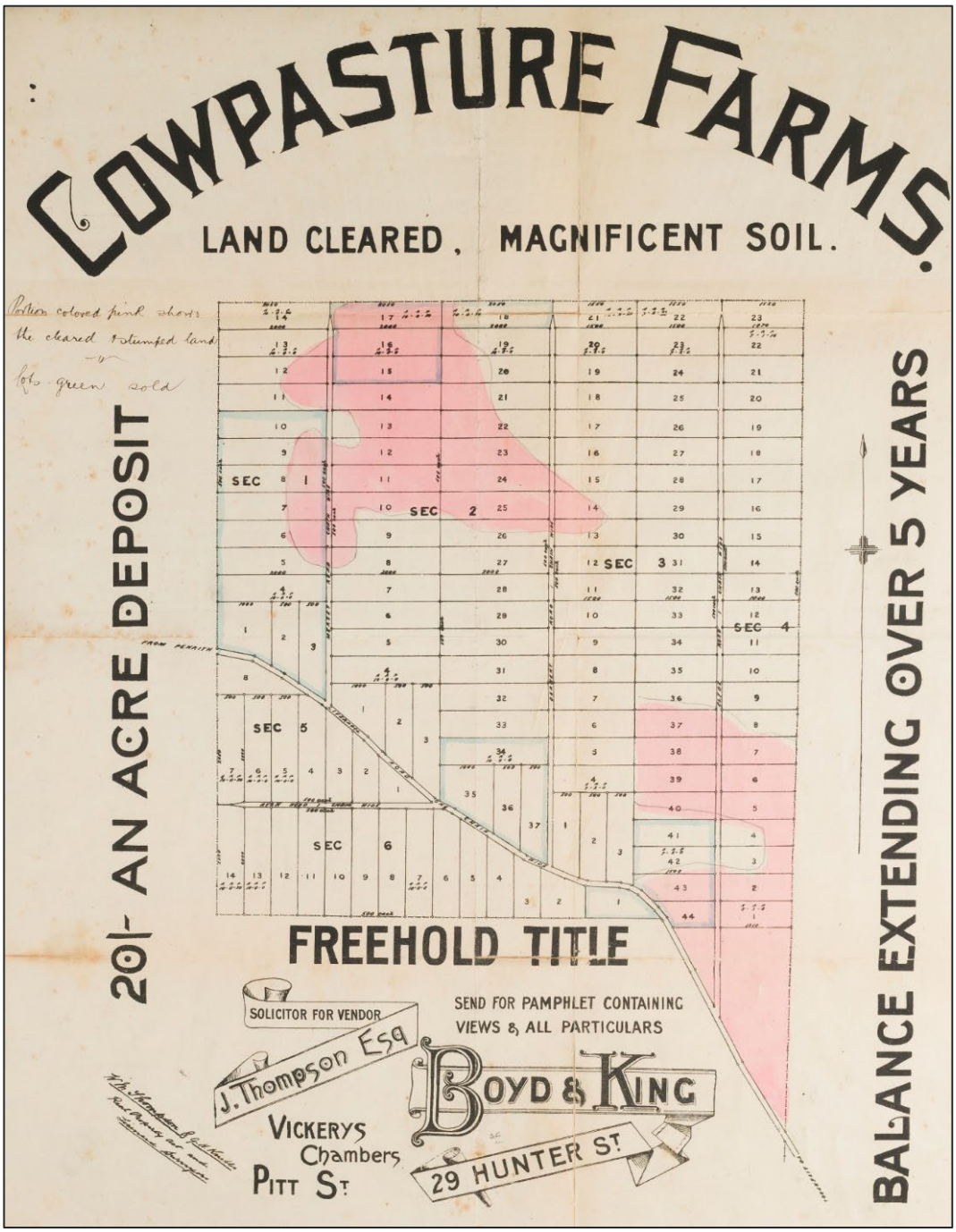
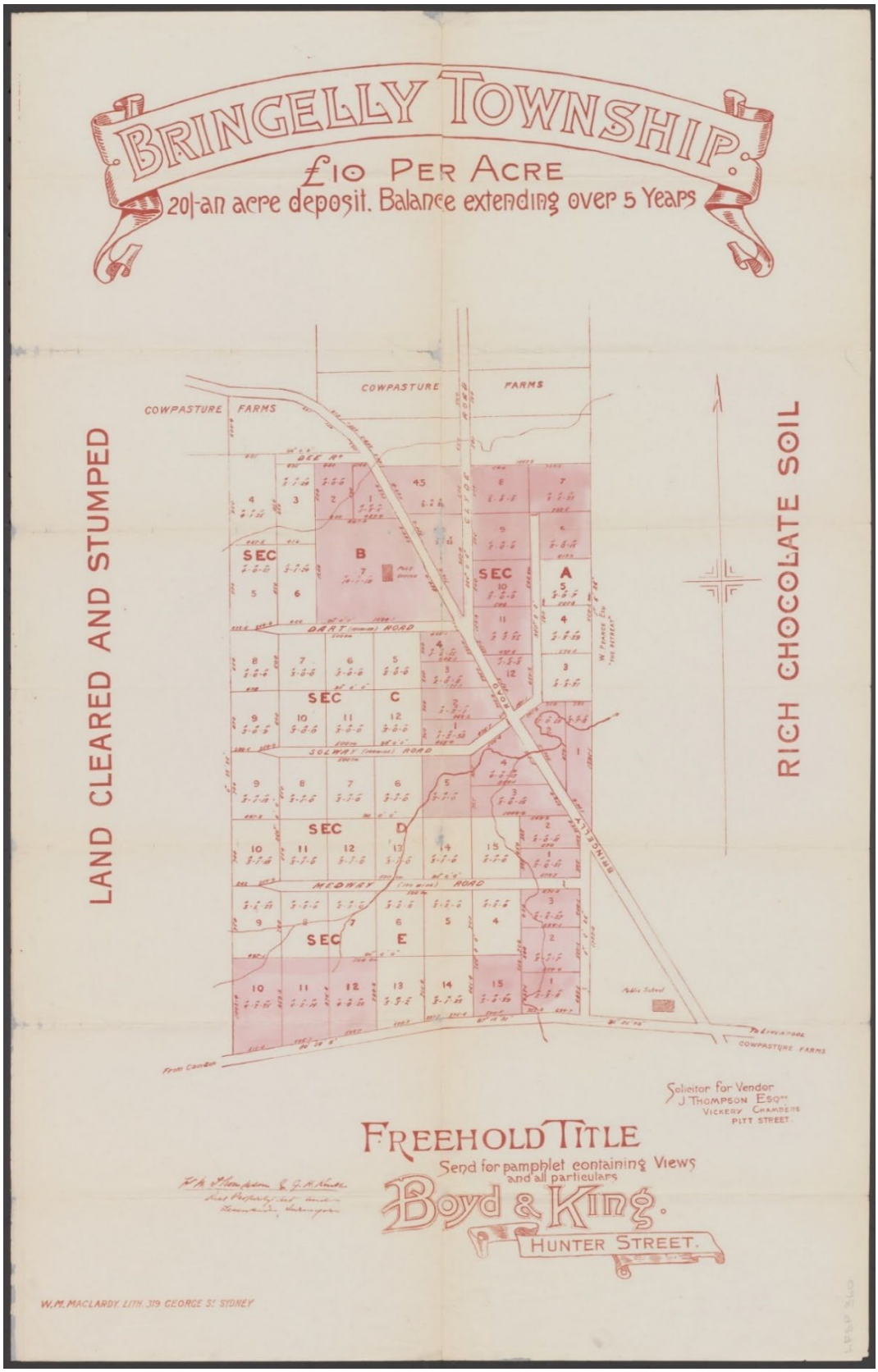


Figure 10. Cowpasture Farms, in 7 and 10-acre blocks, view of property from main road, 1892.
Note: Bringelly Road looking west. Source: SLNSW DSM/Q981.2/B

Figure 11. Cowpasture Farms, in 7 and 10-acre blocks, 1892.
Old homestead [Kelvin Park?] eastern boundary.
Source: SLNSW DSM/Q981.2/B

Figure 12. Bringelly Township, 1892.
Note that the study area is located to the north of this map.
Source: NLA MAP LFSP 360, Folder 28



4.6 Early twentieth century development (1900-1945)

By 1900, the second generation of large landowners had subdivided most of their properties. Many of the smaller lots had been purchased by local families who had been former tenants. During this period, these holdings were consolidated and expanded with the names Braithwaite, Adams, Nobbs. McKaughan, Sales, and Hughes.

The principal agricultural activities undertaken within the district included dairying, orcharding, pig-raising, potato-growing, grazing, and grain production. Industrial activities were mainly associated with the processing of agricultural products. One of the principal activities undertaken in the first two decades of the twentieth century was wood-cutting. The dereliction of many of the larger grazing properties during the latter part of the nineteenth century saw regrowth of native timbers suitable for use as firewood. These activities formed the main stay of the local economy until the Second World War.

The presence of large tracts of cleared land close to the main settled district in New South Wales also saw the Commonwealth take notice. From 19 March 1942 to 28 February 1945, the Commonwealth leased a large portion of Kelvin Park (known then as 'Kelvin') from Lorna MacDonald. This would form the RAAF Bringelly Dispersal Area attached to the parent airfield at Fleurs. The land between Thompsons Creek and South Creek (outside the study area) was developed as an Emergency Landing Ground and included new fencing, drainage, aircraft hide-outs, and other infrastructure. Figure 13 illustrates the location of the dispersal area, landing strip, and fence lines. The area to the west of Thompsons Creek (including the study area) remained substantially unchanged since all infrastructure associated with the strip was concealed in the stands of trees immediately surrounding the strip. The main house at Kelvin (also outside the study area) was leased as officer accommodation.

Figure 13. Map of the manoeuvre area Liverpool NSW, 1906.
Approximate location of study area (red). Source: NLA, NLA.OBJ-232733847

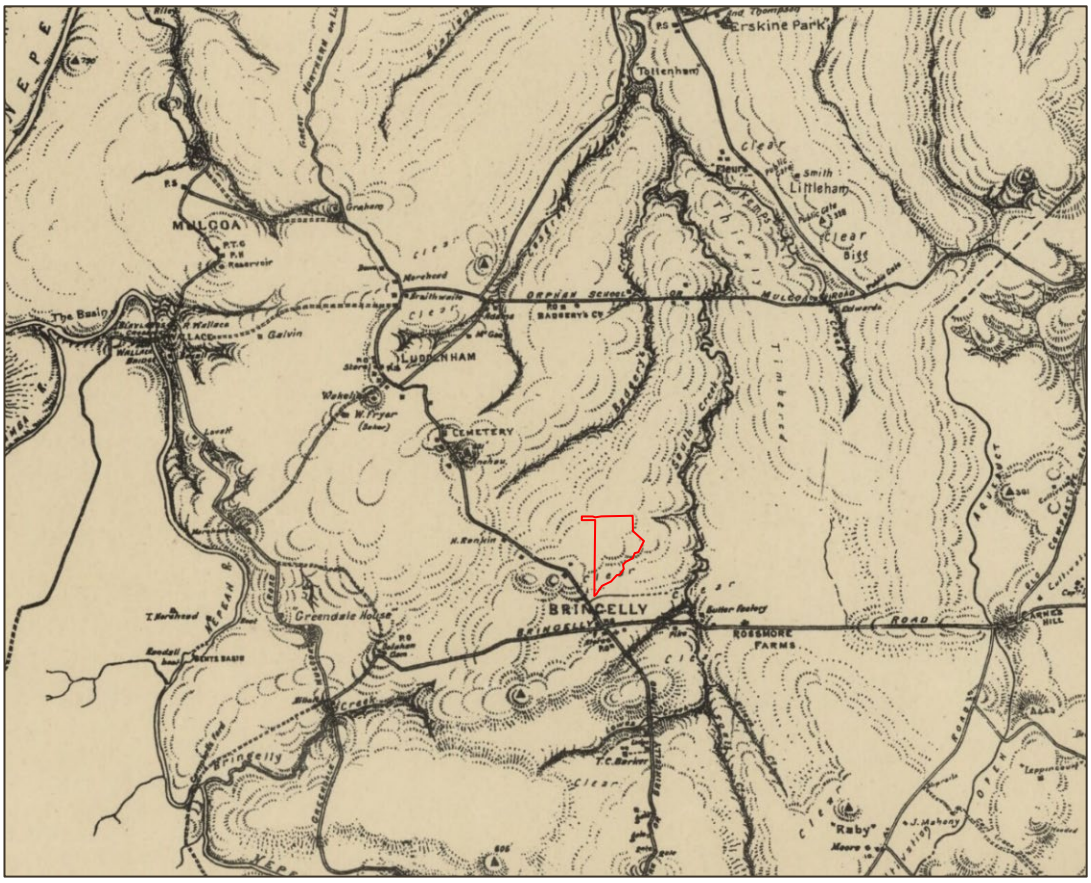
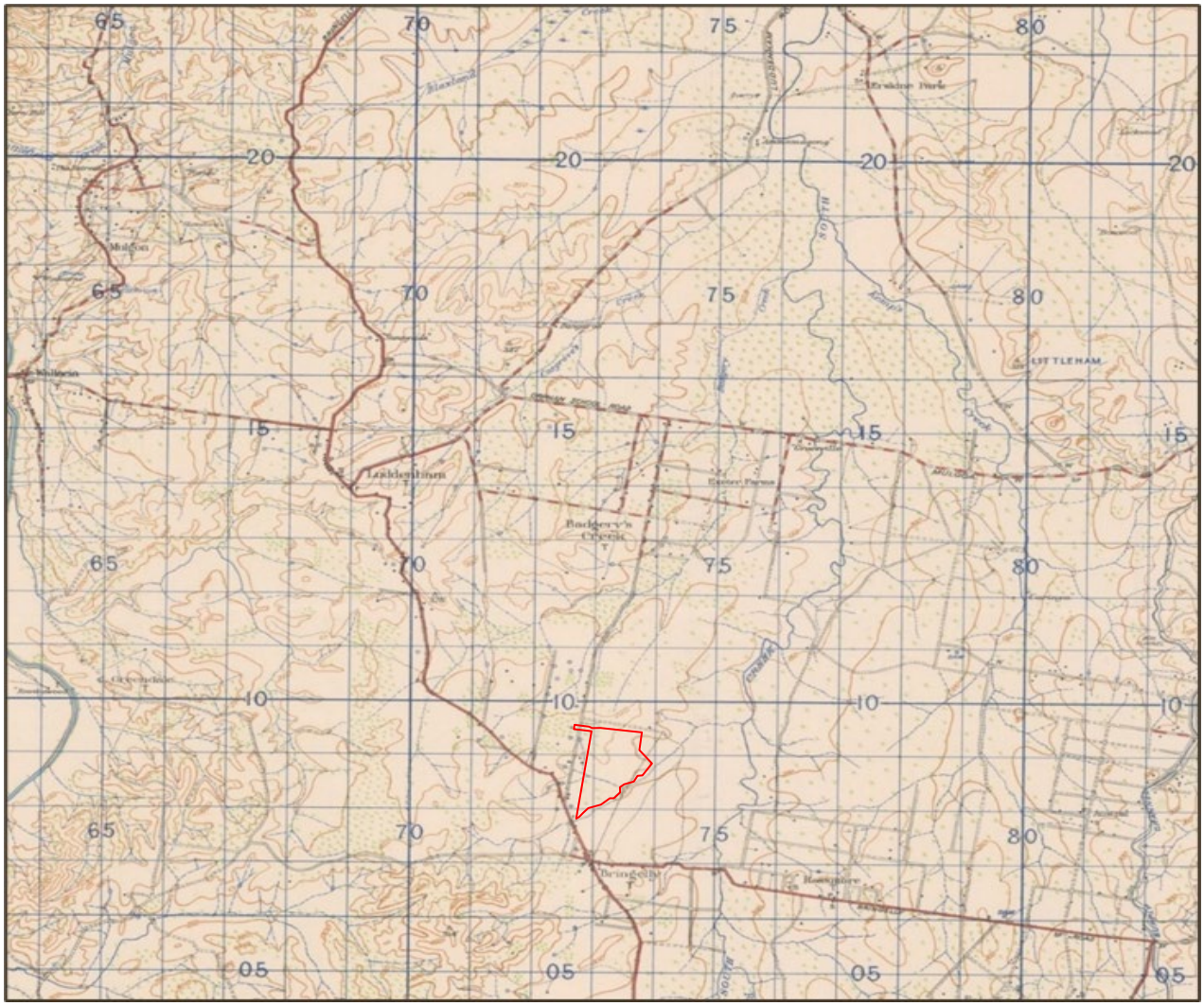


Figure 14. Liverpool NSW, 1935 (Information to 1927) detail.
Source: NLA, NLA.OBJ-446266912



4.7 Late twentieth century development (1945-2000)

Following the Second World War, the region returned to primarily agricultural activities. The introduction of the County of Cumberland Planning Scheme placed the study area within the rural zone adjacent to the green belt that was to encircle Sydney. The County of Cumberland Council, tasked with implementing the scheme, sought to address the problems associated with the rapid development of the County within an unplanned framework. The key problems identified were over-centralisation and congestion of industry, congested traffic, slum housing, conflicting land uses, unregulated residential sprawl, the provision of basic infrastructure, and the destruction of the natural beauty of the County (Abercrombie 2008, 25). The Scheme meant that subdivisions within the study area could not be smaller than 5-acres. This resulted in a spate of 5-acre subdivisions during the early 1950s, many of these lots were taken up by migrant families, with poultry production and market-gardening being the main agricultural enterprises.

4.7.1 RAAF Bringelly Receiving Station

During the Second World War the Royal Australian Air Force (RAAF) developed an area as an Emergency Landing Ground, this was essentially a grass strip with little or no associated infrastructure. In 1954, the

Commonwealth commenced purchasing of land for the construction of a RAAF Radio Receiving Station immediately adjacent to the OTC station. Delays in purchasing the properties resulted in construction commencing in 1959 (Godden Mackay 1997, 5–8). The radio receiving station was designed to receive international radio telegrams and telephone calls and from ships at sea. The station replaced an earlier station at La Perouse and featured thirty-two rhombic aerials on masts from 70 to 120 feet high. The station was to operate in concert with RAAF Londonderry Transmitting Station and subordinate to RAAF Glenbrook (Godden Mackay 1997, 5–8).

The RAAF station comprised several structures. A main receiving tower and receiving station buildings were constructed in the centre of the site. The main receiving building (a T-shaped building at the centre of the site) was constructed between 1959 and 1961. Staff houses were built along the entryway into the complex (Figure 19). Additional structures built included lampposts, water tank and water tower, an incinerator, rain garage, vehicle garages, and two antennas with burial radial lines located within octagonal paddocks. In addition, an array of concrete pads that anchored light aerials were set up across the entirety of the site (Figure 21). Each anchor possessed at least three underground guy-wires. Several of the pads have been mapped but not all (Figure 21). Finally, several roads and tracks through the study area, seen in the 1965, 1986, and present aerials. With the construction of the Metro-Western Sydney Airport line, the core structures and the main aerial at RAAF Bringelly were demolished in 2022 as a part of a State Significant Infrastructure application (SSI-10051).

Figure 15. 1947 aerial of the study area.
Source: Nearmaps with Extent Heritage additions 2021.

Figure 16. 1965 aerial of the study area.
Source: Nearmaps with Extent Heritage additions 2021.

Figure 17. 1986 aerial of the study area
Source: Nearmaps with Extent Heritage additions 2021.

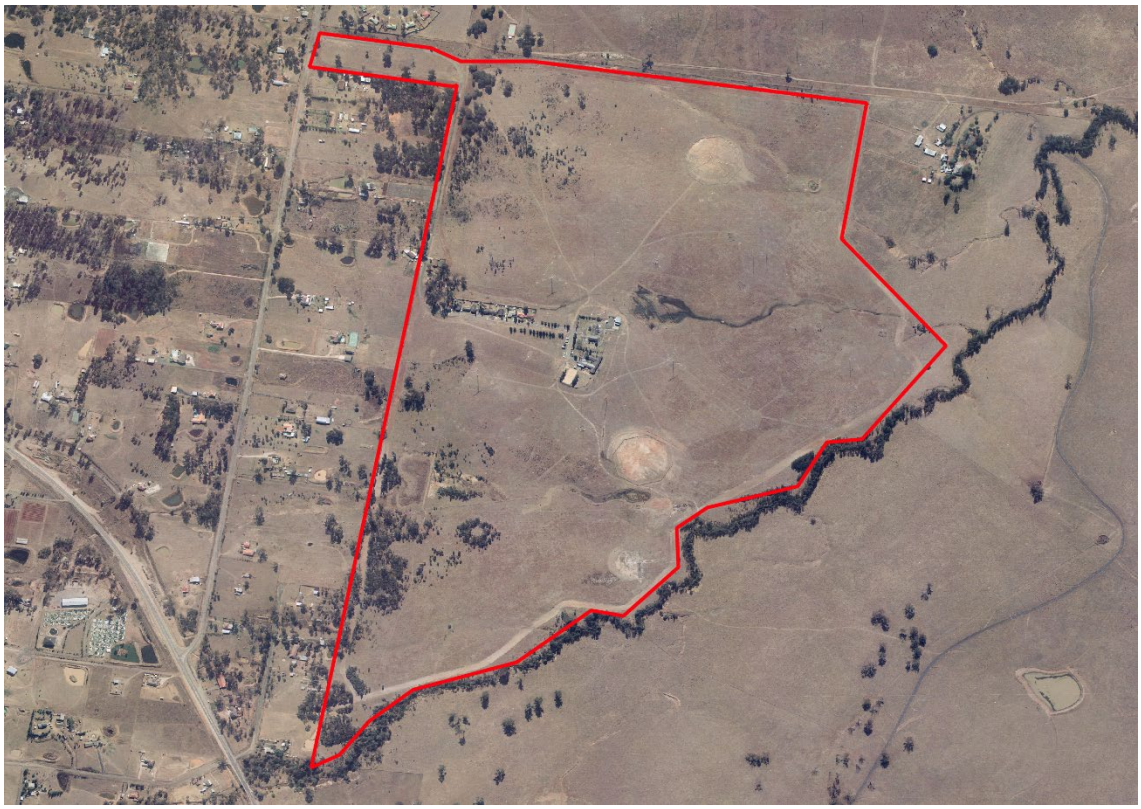


Figure 18. 2021 aerial of the study area.
Source: Nearmaps with Extent Heritage additions 2021.

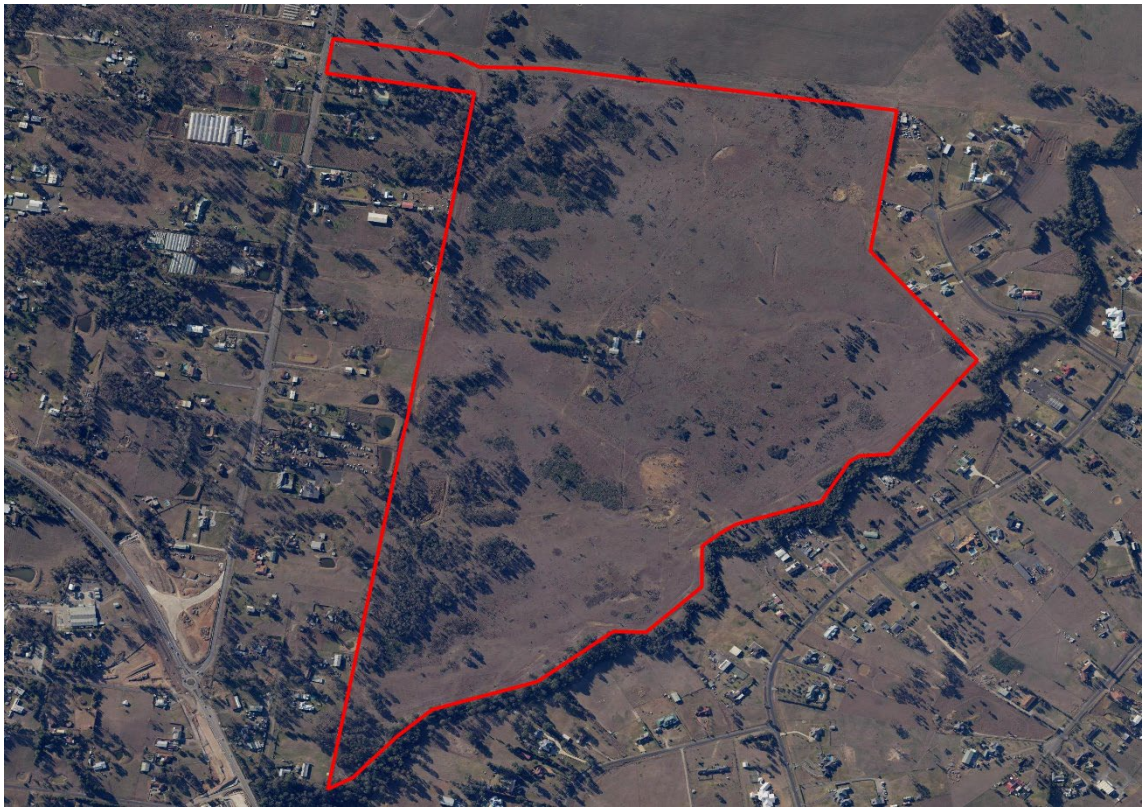


Figure 19. Layout of structures built as part of the RAAF Bringelly site.
Source: ERM 2010, figure 3.5.

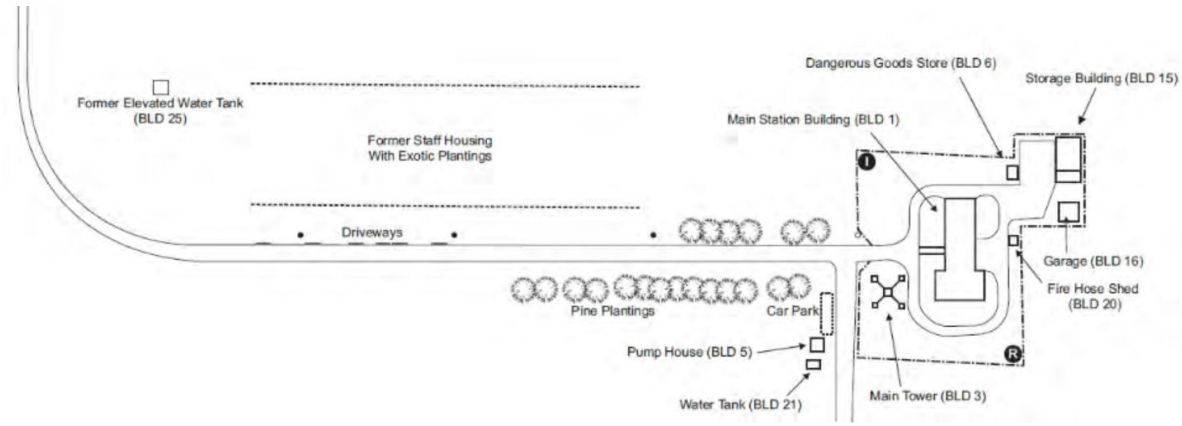


Figure 3.5 RAAF Bringelly Site Layout (ERM 2010)

Figure 20. Layout of structures built as part of the RAAF Bringelly site.
Aerial photograph dated to 1986.
Source: ERM 2010, figure 3.5.

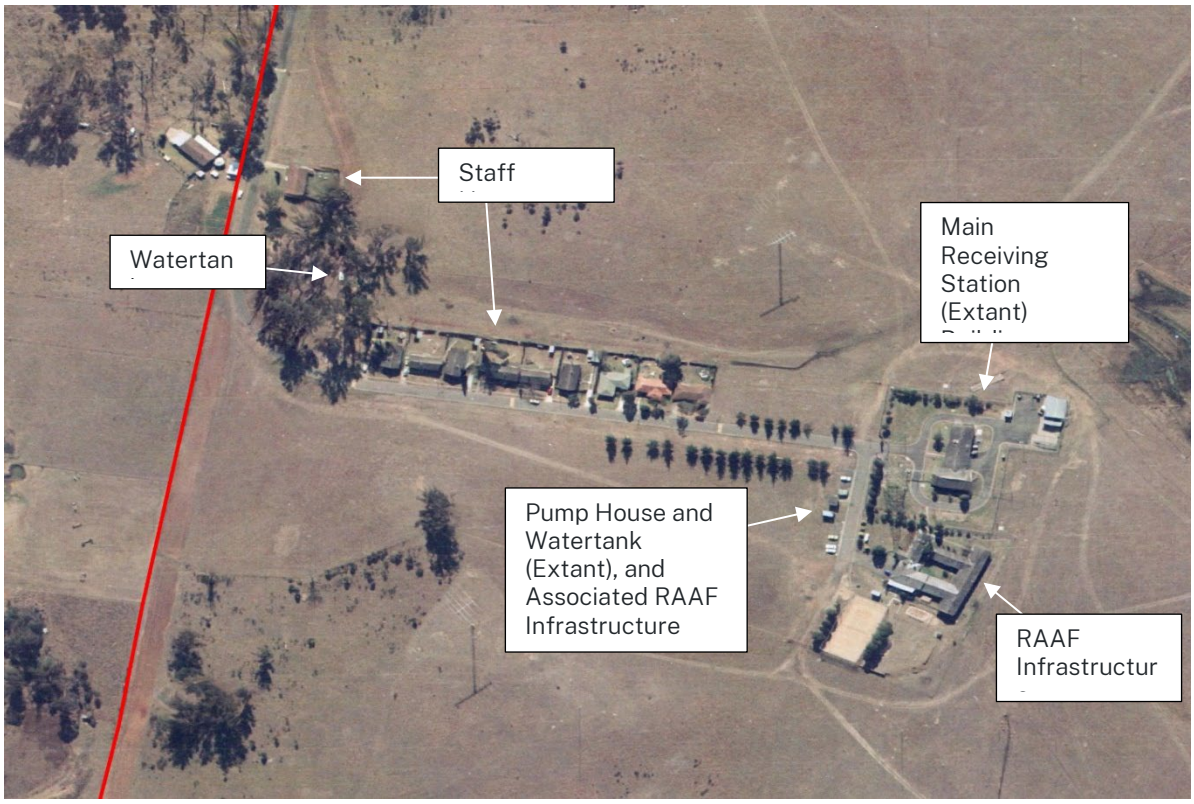


Figure 21. Example of some concrete pads as seen on the 1986 aerial.
Located to the east of the southern antenna. Source: Nearmaps with Extent Heritage additions 2021.

5 Physical description

5.1 Introduction

Extent Heritage carried out a physical assessment of the study area on 18 October 2021. The analysis involved an investigation into the built form and landscape setting. It does not provide a detailed investigation of all fabric but an overview of the elements of the place to assist in determining significance.

Limitations included heavy grass cover across site impeding access, and hot weather causing snake risks. A targeted survey was conducted on foot on exposed sections of the site where vegetation cutbacks had been undertaken to minimise risk.

All terminology for building names is from the ERM Report 'RAAF Bringelly Receiving Station NSW Archival Recording' prepared in 2012.

5.2 The site

The study area is located at 215 Badgerys Creek Road, Bringelly within the Bradfield City Centre of the Western Parkland City. The area is accessed off Badgerys Creek Road via an unsealed road that extends east and bends south towards the main property area. The study area is approximate area of 115 hectares.

The study area consists of an entirely rural area, bounded on the western extent by Thompsons Creek. The area is set on a hill and slopes down towards the south-east. The sites have been largely cleared of vegetation and consists predominately of low-lying dense scrub with several established mature trees.

The main built features within the site include remnants of former staff house sites, lamp posts, a water tank. The landscaping across the study area consists of mature trees, grassed areas and bitumen roads. At the time of reporting, construction for the new Metro Station had begun removing disused RAAF base infrastructure including aerials, antennas, and concrete pads.

5.2.1 Former staff houses

The former staff houses are situated on the north side of the entrance road to the study area. The houses have been removed and the remaining features include concrete driveways, a concrete footpath between driveways with a grass verge, rows of non-native vegetation, lamp posts and communications utilities. The house plots are roughly outlined by exotic plantings that are overgrown and each plot contains remains of building rubble and services.

The concrete driveways and footpaths identified are largely covered by vegetation and are cracking and deteriorating in several places. The grass cover in this section is exceptionally high, with low-visibility.

Figure 22. Overview of remnants of staff houses.

Figure 23. Remnants of concrete footpath.

5.2.2 Unexpected finds – former staff houses

On 1 February 2023, Extent Heritage was notified by Taylor Constructions (on behalf of Sydney Metro) that archaeological remains associated with the former workers cottages were encountered during works on the First Building project. The remains comprised concrete footings and a terracotta drain (Figure 22 to Figure 27). The resources were photographed and assessed by Extent Heritage as falling within the anticipated archaeology that may be encountered within the study area (see Section 6). Archaeology associated with the staff cottages, however, was assessed in this report as holding no significance. As a result, construction was determined to be able to proceed with caution. Extent Heritage advised the contractors that additional remains, notably large artefact deposits, should also warrant notification to a qualified heritage consultancy.

Taylor Constructions completed an Unexpected Heritage Item Site Recording Form. The archaeological features were not impacted and remain in situ. The slot trench was backfilled.

Figure 24 Remains of terracotta pipe associated with the former staff houses

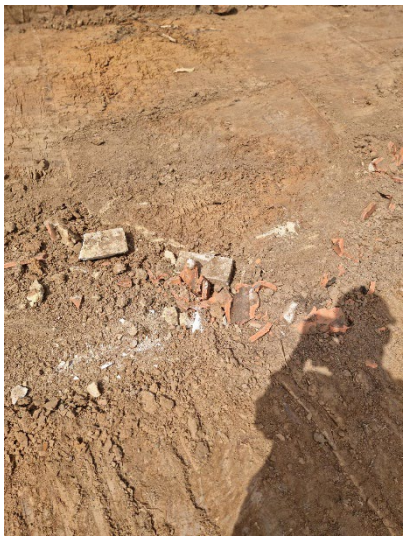


Figure 25 Remains of footings associated with the former staff houses

Figure 26 Details of footings associated with the former staff houses

Figure 27 Overview of location of the former staff houses, facing south

5.2.3 Water tank

An elevated water tank was located approximately 300 metres west of the now demolished main receiving station building and directly uphill of the former staff housing. The water tower was removed from the site in 2010 due to safety hazards posed by its deteriorated structural stability. Although the location of water tank was inspected, the area was very overgrown, and visibility was poor.

Figure 28. View to location of water tower (removed in 2010).

5.3 Settings and views

Bradfield City Centre is set within a portion of Western Sydney characterised by its expansive rural setting with low lying scrub and mature trees. This area is currently undergoing a process of major transformation with the construction of the new international airport, metro station, and associated infrastructure. Development in this area will transform the rural landscape into a new city centre.

Within this landscape, the Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and the Northern Road. The study area is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and the Northern Road. Much of the area to the north, south and east of the study area has been cleared. The study area is bisected by Thompsons Creek which meanders through the landscape in the south-eastern and southern portion of the study area. The creek is lined with mature vegetation which obscures views towards this direction.

At the time of reporting, construction for the new Sydney Metro had begun which saw the removal of equipment and structures associated with the Bringelly RAAF Station, formerly located in the centre of the study area. The eastern boundary of the study area adjoins the rear of properties along The Retreat, Bringelly. At present this area are characterised by low density urban space surrounded by large rural residential allotments.

The current landscape character of the area is predominately rural reflecting the history of agricultural and pastoral uses of the area. This is principally evidenced by the 'Kelvin' homestead complex, which is located approximately 100 metres to the east of the study area at 30 The Retreat, Bringelly. The 'Kelvin' homestead complex is set on a rise, overlooking Thompsons Creek to the east, on a remnant of pasture of the original 1200 acres. The current curtilage for the item, a result of progressive land subdivisions between 1812 and 1985, retains all key features that contribute to the heritage significance of the early nineteenth century homestead and various outbuildings. The setting of this item is retained through the retention of a semi-rural landscape to the north and east.

5.3.1 Key views

There are no direct public views to the study area due to its location within a large open, rural landscape surrounded by private land with low scale residential buildings along Badgerys Creek Road and The Retreat. While views to the study area can be observed from Badgerys Creek Road looking east, views are highly obscured by mature trees along the boundary of the study area. Similarly, views from Kelvin Park Drive to the study area are obscured by the mature vegetation along Thompsons Creek. As a result, there are no key views from the study area to the following heritage items in the vicinity:

- Church of the Holy Innocents at 130 Rossmore Avenue, West Rossmore
- Bringelly Public School at 101 Wentworth Road, Bringelly and
- Cottage at 1168 The Northern Road, Bringelly.

The state heritage listed item, 'Kelvin', is in the vicinity of the study area and retains a visual connection to the wider rural landscape, which includes the study area. While key views to this item from the public domain are limited to the cul-de-sac of The Retreat and from within the property itself. The surrounding rural landscape to this heritage item preserves a visual catchment to land that was historically connected to the homestead. The 2006 CMP for Kelvin notes the following:

> The homestead of Kelvin retains important historic views to the east from the homestead to Thompsons Creek and beyond towards South Creek. The site also retains views of other historically related rural landscapes beyond the current boundaries such as the pasture and strands of trees to the north. Both views contribute to the site's significance and maintain the context of a semi-rural character for the homestead (Form 2006, 78).

While a visual curtilage to the north, east and west of Kelvin retains the semi-rural character, residential subdivisions to the southeast and southwest have compromised the items connection to the wider rural setting. The CMP notes that views to the north and east of the item make a greater contribution to the heritage significance and setting of Kelvin.

A views analysis was undertaken in 2006 as part of the preparation of the CMP and has been incorporated into the views and setting assessment of this report. While the land to west of Kelvin contributes to the rural setting, it is not a key contributor to significance. Key views from the surrounding landscape, as supported in the 2006 CMP, include the following:

- View corridor 1: view northeast from bridge;
- View corridor 2: view east from The Retreat to the homestead and various farm buildings;
- View corridor 3: view northwest from Thompsons Creek to the homestead;
- View corridor 4: view west from Thompsons Creek to homestead;
- View corridor 5: view southwest from Thompsons Creek to homestead.

Key views from Kelvin, as supported in the 2006 CMP, include the following:

- view east from Kelvin homestead to Thompsons Creek (view corridor is noted as being 120 degrees).

Figure 29. View corridor adapted from 2006 CMP for Kelvin by FORM Architects.
Map showing key views State heritage listed item.

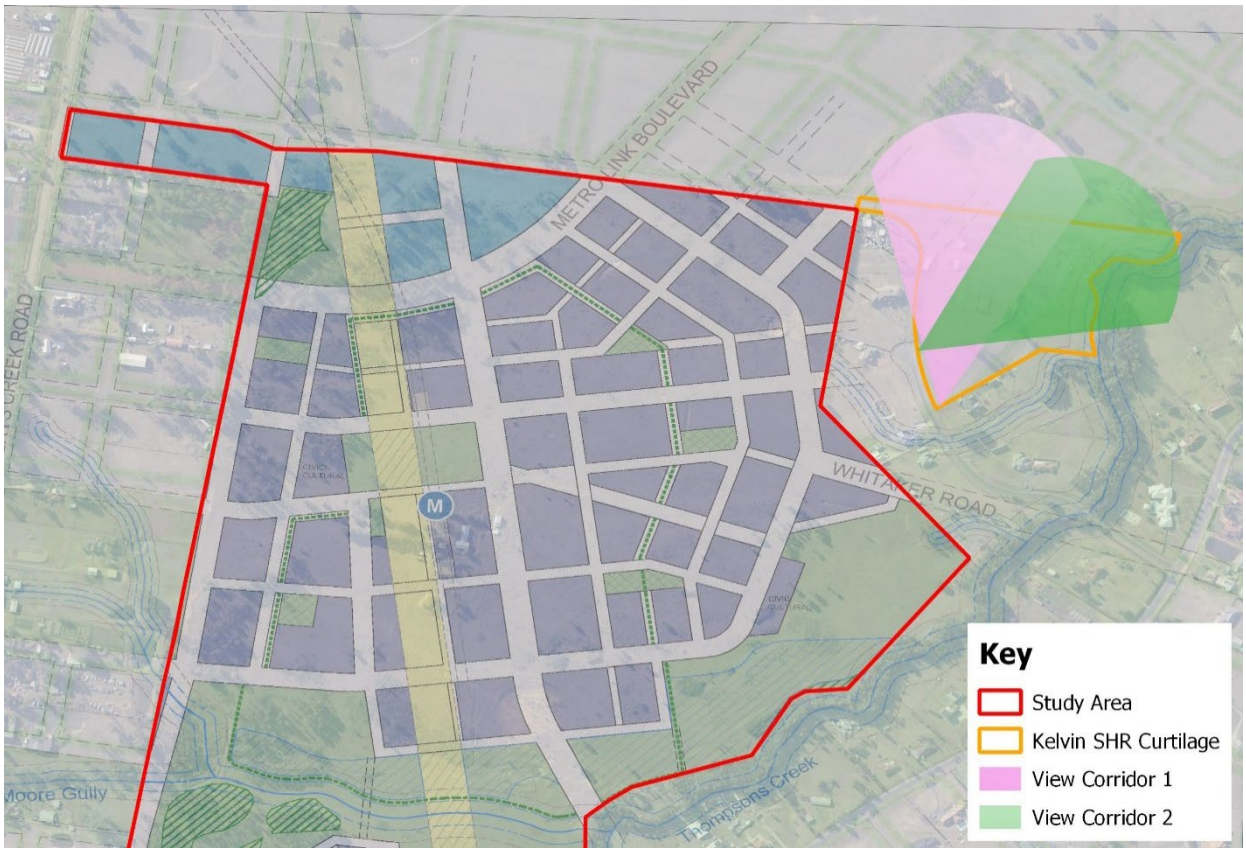


Figure 30. View corridor adapted from 2006 CMP for Kelvin
Map by FORM Architects showing key views to homestead (marked in black)

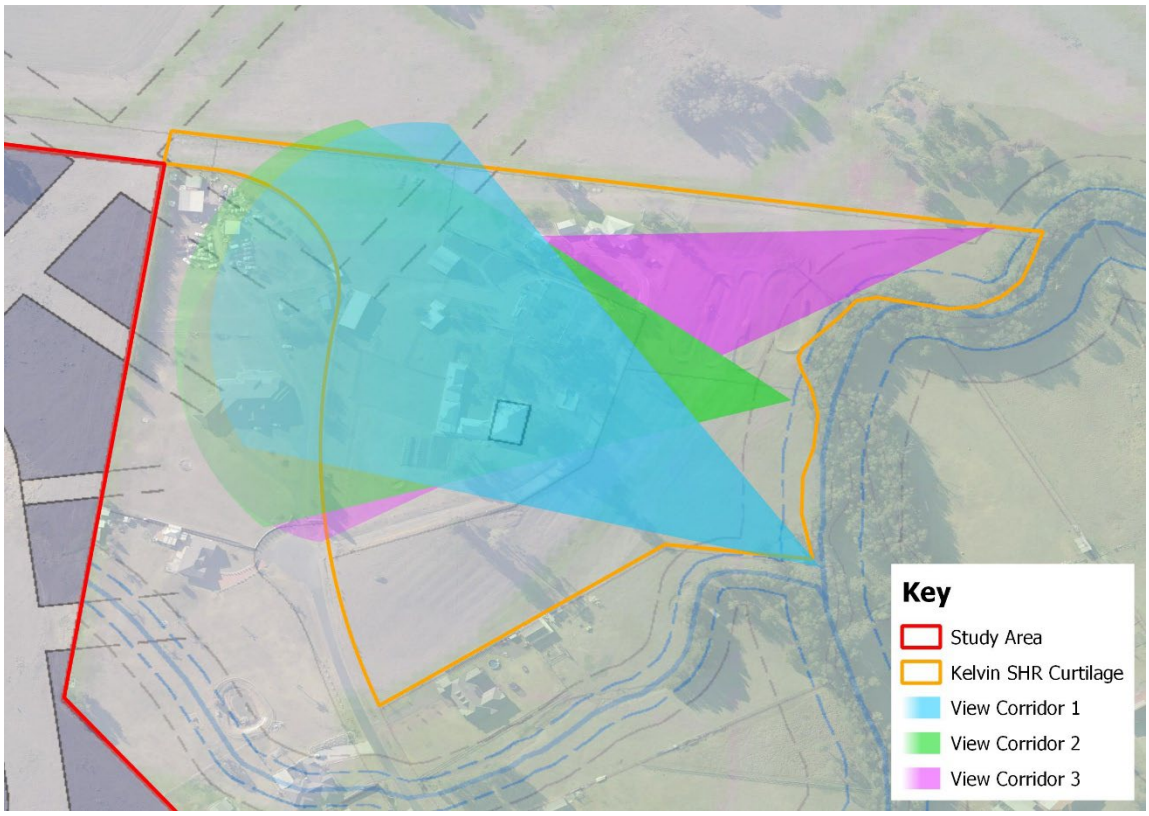


Figure 31. View analysis prepared as part of the 2006 CMP for Kelvin
Showing views from Kelvin.

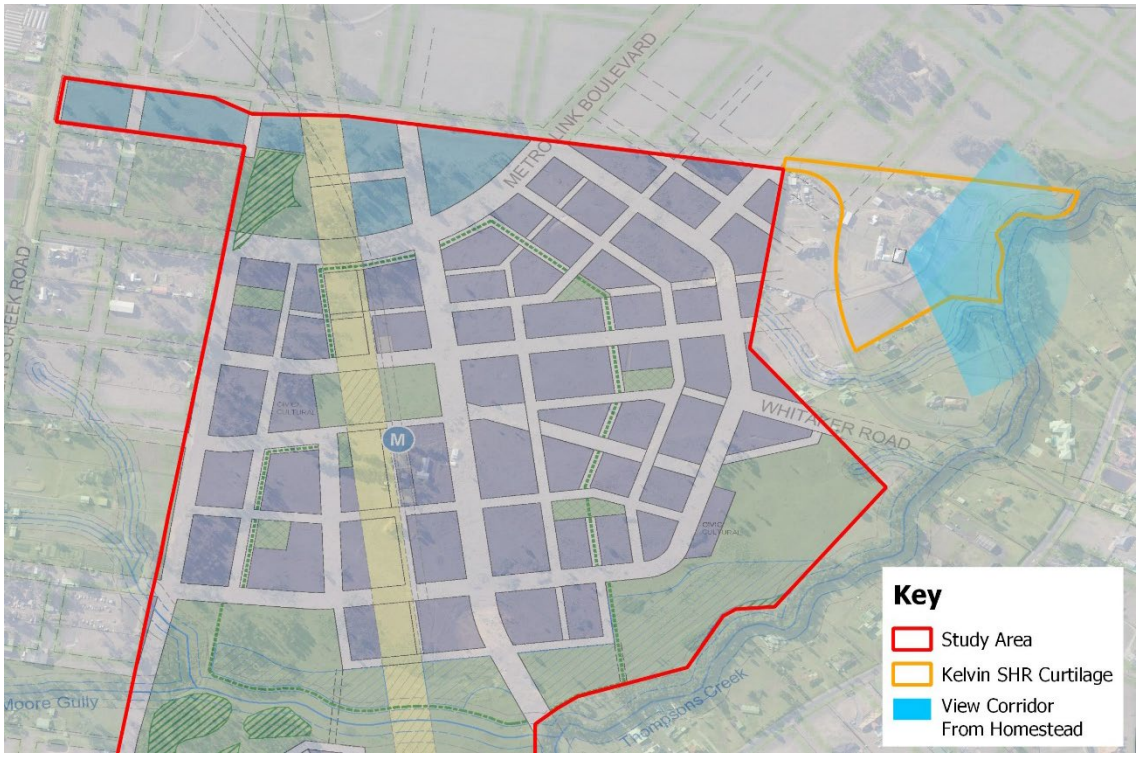


Figure 32. Key views across the study area (see Figures 34-36).
Source: Nearmap 2021 with Extent Heritage additions.

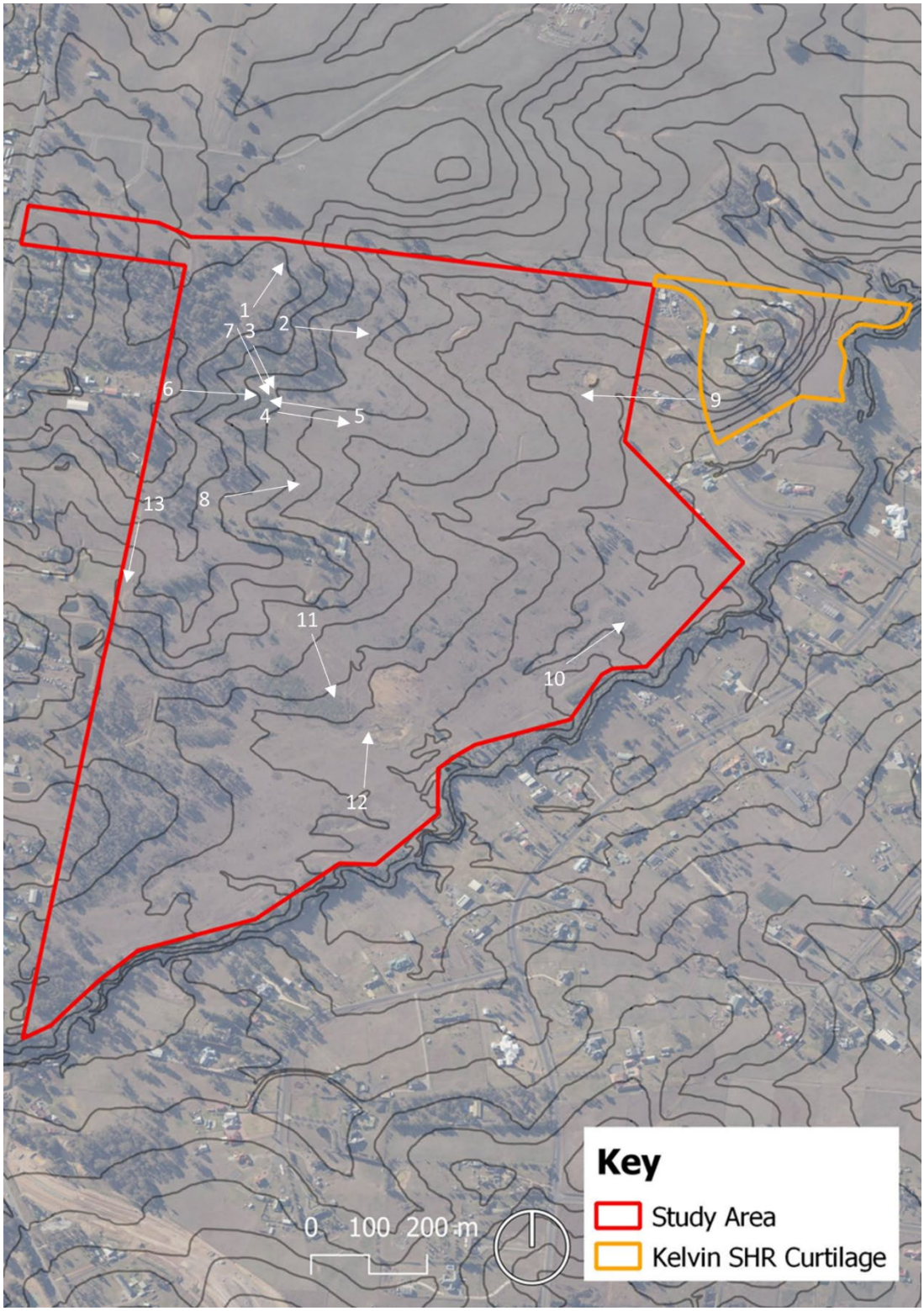


Figure 33. View 1 – northwestern corner of study area looking north

Figure 34. View 2 – northwestern corner of study area, facing Kelvin, looking east

Figure 35. View 3 – northwestern corner of study area looking east

Figure 36. View 4 – northwestern corner of study, facing Kelvin, looking east

Figure 37. View 5 – northwestern corner of study area, looking west

Figure 38. View 6 – northwestern corner of stud area, looking east

Figure 39. View 7 – northwestern corner of study area, looking southeast.

Figure 40. View 8 – northwestern corner of study area, looking east towards Kelvin homestead

Figure 41. View 9 – view from Kelvin looking west towards the study area (shown by green arrow).
Outside study area

Figure 42. View 10 - View west from north-eastern corner of the study area.
General overview of study area

Figure 43. View 11 - View west, south of dam and associated soak
General overview of study area

Figure 44. View 12 - view north from the southern portion of the study area
General overview of study area

Figure 45. View 13 – View northward from south-western portion of the study area

6 Historical archaeological potential

6.1 Introduction

Archaeological potential refers to the likelihood of a site to contain evidence of previous phases of historical occupation. Archaeological features and deposits in the form of structural remains and artefact bearing deposits are tangible evidence of previous occupation and human activities. The study area's archaeological potential is usually presented in accordance with (1) the types of potential archaeological remains associated with features or activities that may survive at the site, (2) a date indicating the year by which the resource is known to have been constructed, (3) the likely extent and integrity of relics, i.e. the predicted level of survival, which is expressed in accordance with the following rankings:

- High: it is likely that archaeological relics associated with a particular historical phase or features survive intact.
- Moderate: it is possible that some archaeological relics associated with a particular historical phase or features survive, but they may have been subject to some disturbance.
- Low: it is unlikely that archaeological relics associated with a particular historical phase or features survive.
- Nil: the degree of ground disturbance indicates that there is no potential for any significant archaeological relics to be preserved.

This section identifies where archaeological evidence is likely to be found at the site, and to what extent it may be preserved.

6.2 Phases of development and historical archaeology

Phase 1: Aboriginal occupation, pre-1788

The archaeological evidence associated with the pre-1788 Aboriginal occupation of the study area has been examined in the Western Parkland City Authority Bradfield City Centre Aboriginal Cultural Heritage Assessment Report (ACHAR) in preparation by Extent Heritage (February 2022).

Phase 2: British exploration and survey, 1788-1804

Activities undertaken during this phase include exploration and first surveys. These activities are unlikely to have left physical traces ('relics') on the site. Survey marks, such as blazed trees have not been located despite an investigation of the site and an examination of mature trees.

Phase 3: Early settlement, 1805-1850

Activities undertaken during this phase of development are primarily associated with the formation and operation of 'The Retreat' ('Kelvin'). The study area was cleared of trees and converted to grazing land. Most developments were concentrated around the homestead itself (outside the study area). Archaeological remains are likely to be restricted to evidence of former fence lines and tracks. These features are expected to be shallow and ephemeral. As a result, they have likely been removed by twentieth century earthworks.

Phase 4: Nineteenth century subdivision, 1850-1900

As for Phase 3.

Phase 5: Early twentieth century development, 1900-1945

During this period, the area surrounding the study area was utilised as the RAAF Bringelly Dispersal Area. However, the study area remained substantially unchanged. The 1947 aerial shows ploughing was undertaken across a majority of the site. Archaeological remains are likely to be restricted to evidence of former fence lines and tracks. These features are expected to be shallow and ephemeral. As a result, they have likely been removed by twentieth century earthworks.

Phase 6: Late twentieth century development, 1945-2000

The main activity associated with this phase of the site's development was the operation of the RAAF Bringelly Receiving Station. The main station building, associated radio tower, buildings, and sheds, in the centre of the study area have now been demolished as a result of construction works for Sydney Metro-Western Sydney Airport line (Figure 19). The driveway connecting the main station to Bringelly Road also remains in use. These features are considered built heritage and not archaeological.

To the south of the demolished main station building, associated infrastructure is first visible on the 1965 aerial. The infrastructure comprises a substantial box-shaped building and smaller, more temporary-looking sheds. The structures were demolished in 2021. Potential archaeological remains associated with the buildings include footings, demolition deposits, services, and isolated artefacts and artefact scatters connected to telecommunications.

Former staff houses, with exotic plantings, were located on the northern boundary of the road leading to the main station building. Nine houses fronting the road can be seen on aerials between 1965 and 2021 (Figure 16-Figure 18). An additional house, constructed fronting the road to the west, is visible on the 1985 aerial (Figure 17). Each house possesses a small backyard enclosed by low fencing. Some trees and plants are visible in the rear yards of the properties. Potential archaeological remains associated with the houses include footings, demolition deposits, services, footings associated with backyard sheds. Isolated artefacts and artefact scatters connected to domestic occupation of the site may be identified.

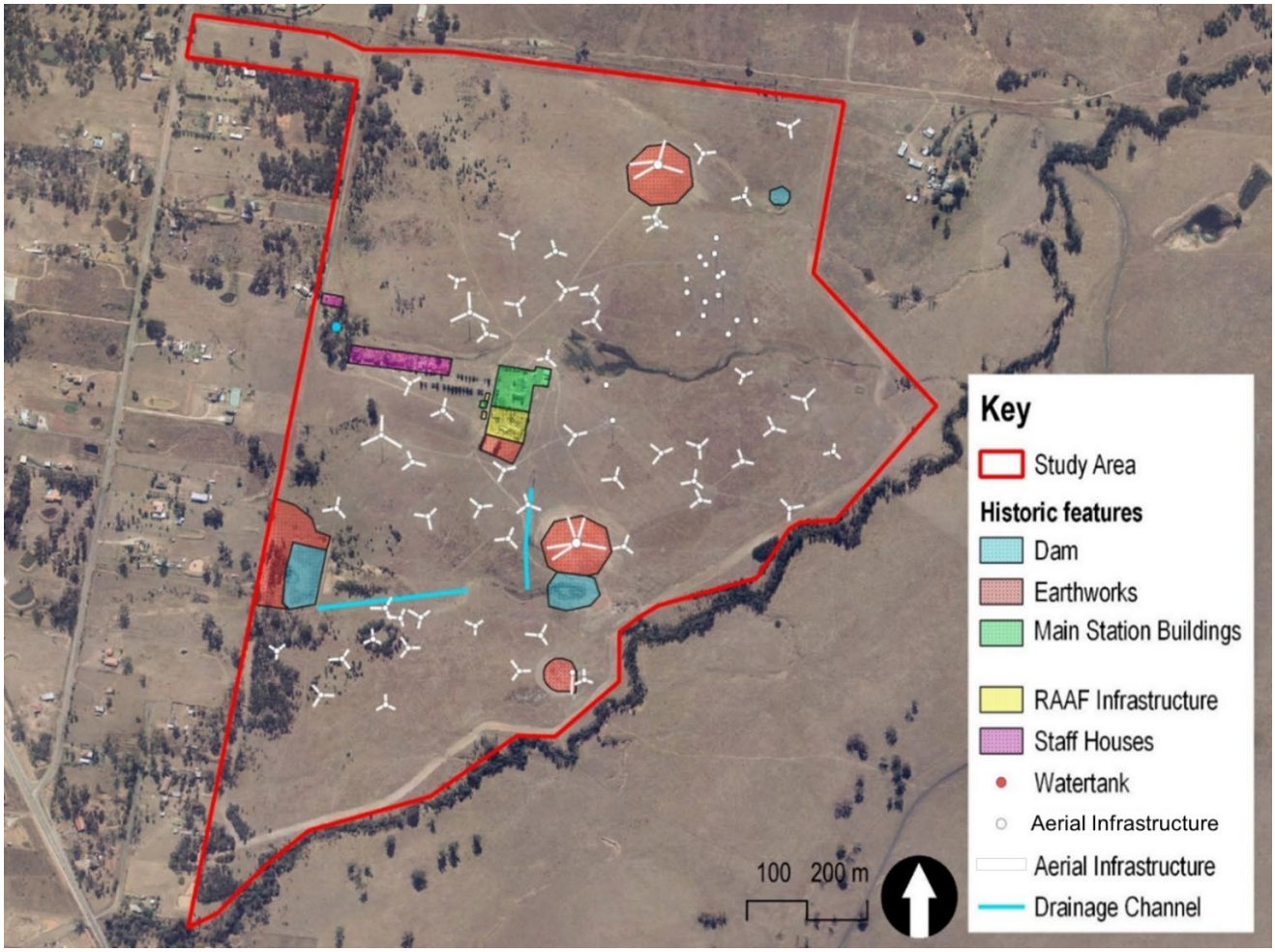
Across the remainder of the study area, RAAF infrastructure include light aerials, underground guy wires, and concrete pads are found (Figure 21). While the aerials themselves have often been removed, all the features are visible in the landscape. Evidence of landscaping is also present. This includes cut drainage channels, grading for the installation of large aerials, installation of dams, and general earth removal for unknown reasons.

No new construction has been built on the top of these demolished RAAF base features. Some, but not all, of the earthworks and aerial infrastructure is shown below.

Phase 7: Intensive Development, 2000-present

Activities associated with this phase of development do not fall within the scope of archaeological investigation.

Figure 46. Plan showing former location of RAAF infrastructure.



6.3 Disturbance

Evidence from the historic aerials and an understanding of the extensive construction program associated with the Bringelly RAAF base has revealed heavy ground disturbance occurred across the entirety of the study area.

Figure 46 identifies several locations of RAAF infrastructure including concrete pads, drainage channels, evidence of light aerials and more, the graphic is not extensive. The main station building, associated radio tower, buildings, and sheds, in the centre of the study area have now been demolished as a result of construction works for Sydney Metro-Western Sydney Airport line.

The results of the Aboriginal test excavation program (Extent Heritage 2021) across the southern and eastern half of the study area revealed intact natural soil profiles. The presence of natural soil horizons supports the potential for subsurface historical archaeological remains. However, the results also showed that the top layer of ground had been previously stripped. The minimal development of the topsoil indicated this stripping occurred relatively recently, likely during the sites use as the RAAF Bringelly Receiving Station (Phase 6). As a result, shallow archaeological features such as paths/tracks and fence lines from Phases 3-5 are likely to have been removed.

No testing was undertaken in the area directly surrounding the main station building and staff houses. In addition, no later developments have been constructed in these areas. As a result, deeper or more substantial archaeological remains have a higher potential for survival in these areas.

Overall, the study area has undergone severe ground disturbance as a result of its use as the Bringelly RAAF base (Phase 6). The significant earthworks will have removed surface and shallow subsurface archaeological remains from earlier periods.

6.4 Summary of historical archaeological potential

Three phases (Phase 1, Phase 2, and Phase 7) have been determined to hold no archaeological potential. Phases 3-5 are expected to possess only shallow archaeological features which are likely to have been impacted by later developments associated with the construction of the Bringelly RAAF base (Phase 6). Regarding Phase 6, much evidence of aerial infrastructure and earthworks is still visible on the ground surface, indicating its presence. Archaeological evidence associated the staff houses and RAAF infrastructure in the vicinity of the Main Station Building is unknown. However, no later developments have been made over their locations which increases the potential for subsurface remains to be identified.

The following table outlines the historical archaeological potential across the study area.

Table 5. Summary of historical archaeological potential

Phase	Potential features	Level of potential
Phase 1: Aboriginal occupation (pre-1788)	No historical archaeology.	NA
Phase 2: British exploration and survey (1788-1804)	No historical archaeology.	NA
Phase 3: Early settlement (1805-1850)	Postholes associated with fence lines Tracks	Low
Phase 4: Nineteenth century subdivision (1850-1900)	Postholes associated with fence lines Tracks	Low
Phase 5: Early twentieth century development (1900-1945)	Postholes associated with fences Tracks	Low
Phase 6: Late twentieth century developments (1945-2000)	*Staff Houses:* Postholes associated with fences Footings Demolition deposits Services Isolated artefacts and artefact scatters associated with occupation	High
	RAAF Infrastructure: Footings Demolition deposits Services Isolated artefacts and artefact scatters associated with telecommunications and the military	High
	Aerial infrastructure: Concrete pads Light aerials Guy wires	High
	Earthworks: Dams	Extant

	Landscape modifications and grading Drainage channels	
Phase 7: Post-2000 intensive development	No associated archaeology.	NA

7 Assessment of heritage significance

7.1 Built heritage

The NSW Heritage Manual was developed by the Heritage Office and the former NSW Department of Urban Affairs and Planning to provide the basis for an assessment of heritage significance of an item or place. This is achieved by evaluating the place or items significance in reference to specific criteria, which can be applied at a national, state, or local level (Heritage Office 2001). The NSW Assessing Heritage Significance details these specific criteria which are quoted in Section 7.1, below. (Heritage Office 2001, 9). The significance of the study area is assessed against these criteria below.

7.1.1 Assessment criteria

Criterion (a) An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (b) An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (c) An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area);

Criterion (d) An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons;

Criterion (e) An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (f) An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area);

Criterion (g) An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments. (or a class of the local area's cultural or natural places; or cultural or natural environments.)

7.2 The site of Bradfield city centre

7.2.1 Heritage assessment

Table 6. Assessment against heritage criteria

Criteria	Assessment
Historic	The site of the Bradfield City Centre (also known as RAAF Bringelly) is of some local historical significance forming a part of 600 acres of land granted to Thomas Laycock on 26 November 1818, initially known as 'Cottage Vale'. This grant was later absorbed with the Charles Reid's adjoining 600-acre grant to the south and the consolidated estate was known as 'The Retreat'. The main farm complex and homestead 'Kelvin' survive substantially intact to the north-east of the study area. The study area is of some local historical significance as a part of the RAAF Bringelly Dispersal Area which developed between 1942 and 1945 and was attached to the parent airfield at Fleurs. The area between South Creek and Thompson's Creek were developed as an Emergency Landing Ground. Although the study area formed a part of this property, it remained substantially unchanged since all infrastructure associated with dispersal area were concealed in the stands of trees immediately surrounding the landing ground. In 1954, the Commonwealth commenced purchasing of land for the construction of a RAAF Radio Receiving Station which included the study area. RAAF Bringelly was one of two high frequency radio telecommunication sites in Sydney. The radio receiving station was designed to receive international radio telegrams and telephone calls and from ships at sea. Advances in technology rendered the radio receiving station obsolete and was downgraded in the late 1980s (AMC 2014, 28). During the 1990s and into the 2000s buildings and infrastructure were progressively removed leaving only the core structures and the main aerial intact, although these were demolished in 2022 to make way for the Sydney Metro-Western Sydney Airport line,
Associative	The study area is historically associated with the Royal Australian Air Force through its use as RAAF Bringelly. This association is not considered a strong or special association in in NSW's cultural history. This criterion is not met.
Aesthetic/Technical	The remaining structures with the study area relate to RAAF Bringelly. These structures are purely functional in nature and have limited aesthetic qualities. The landscaping and plantings display some aesthetic qualities as they are indicative of attempts to beautify the main approach to the building complex. Nonetheless, the site has minimal aesthetic qualities and does not meet this criterion.
Social	The study area does not have any established social significance to any particular community or group at a state or local level. This criterion is not met.

Scientific	The layout of the study area dates from its use as the RAAF Bringelly station complex. The layout illustrates some of the spatial requirements associated with the original radio transmitting technology and the social requirements of its operating staff. The site has some historical archaeological potential within the former staff housing area. RAAF Bringelly housed sophisticated state-of-the-art equipment at various times during its operational life, however, none of this equipment remains in the station now. The loss and deterioration of technical equipment and structures relating to the RAAF Bringelly has diminished the site's potential to contribute to an understanding of cultural history. The criterion is not met.
Rarity	RAAF Bringelly is one of a small number of similar high-frequency radio transmitting and receiving stations in Australia (see Comparative analysis of similar sites in ERM 2011, 64-78). The site is an incomplete relic of a specific period of telecommunications technology which was a significant stage in the development of telecommunications but one which has been superseded by later technologies. For these reasons, including the loss of fabric, this criterion is not met.
Representativeness	The study area is an incomplete representative example of a general purpose based military pattern-book building utilised and configured for a singular purpose. The quality is held in common with a large number of other buildings (ERM 2011, 64-78). The surrounding land within the area associated with the Station are representative of the requirements of radio telecommunications facilities for large and isolated sites capable of housing a dispersed antenna network. There are better, more intact representative of these kinds of purpose-built structures. The criterion is not met.

7.2.2 Discussion of significance

ERM prepared a Heritage Assessment for the RAAF Bringelly Receiving station for the Department of Defence in April 2011 (64-84). This assessment determined the historic heritage values of the study area. This statement of significance has been adapted from this report and updated based on the recent physical analysis of the site.

The site of the Bradfield City Centre (also known as RAAF Bringelly) is of some local historical significance forming a part of 600 acres of land granted to Thomas Laycock on 26 November 1818, initially known as 'Cottage Vale'. This grant was later absorbed with the Charles Reid's adjoining 600-acre grant to the south and the consolidated estate was known as 'The Retreat'. The main farm complex and homestead 'Kelvin' survive substantially intact and is located outside of the study area.

The study area is also of some local historical significance as a part of the RAAF Bringelly Dispersal Area which developed between 1942 and 1945 and was attached to the parent airfield at Fleurs. In 1954 the Commonwealth commenced purchasing of land for the construction of a RAAF Radio Receiving Station which included the study area. The radio receiving station was designed to receive international radio telegrams and telephone calls from ships at sea. Advances in technology rendered the radio receiving station obsolete and it was downgraded in the late 1980s (AMC 2014, 28). During the 1990s and into the 2000s buildings and infrastructure were progressively removed leaving only the core structures and the main aerial intact.

The study area is historically associated with the Royal Australian Air Force through its use as RAAF Bringelly, although this association is not considered a strong or special association in in NSW's cultural history.

The study area possesses minimal aesthetic qualities. The remaining extant structures and buildings within the study area relate to RAAF Bringelly. These structures are purely functional in nature and have limited aesthetic qualities. The landscaping and plantings display some aesthetic qualities as they are indicative of attempts to beautify the main approach to the building complex.

The study area does not have any established social significance to any particular community or group at a state or local level.

The layout of the study area dates from its use as the RAAF Bringelly station complex. The layout illustrates spatial requirements associated with the original radio transmitting technology and the social requirements of its operating staff. The site has some historical archaeological potential within the former staff housing area. The loss and deterioration of technical equipment and structures relating to the RAAF Bringelly has diminished the site's potential to contribute to an understanding of cultural history.

RAAF Bringelly is a rare but incomplete example of a small number of similar high-frequency radio transmitting and receiving stations in Australia. The site is an incomplete relic of a specific period of telecommunications technology which was a significant stage in the development of telecommunications but one which has been superseded by later technologies. There are better, more intact representative of these kinds of purpose-built structures.

Although the study area has some historical and rarity values within the local area, the loss of important technology and equipment relating to the RAAF Bringelly limits its significance. It is also unlikely that the site will ever be returned to its original function which is a key part of its significance.

The study area is therefore considered to have low heritage significance as a result of the loss of equipment and technology and the as it does not meet any of the above criteria. The study area is not considered to meet the threshold as a site of local or state heritage significance.

7.3 Heritage in the vicinity

7.3.1 Kelvin

The following statement of significance is quoted from the State Heritage Inventory form for 'Kelvin' (Heritage NSW, last updated 2005).

> Kelvin Park, formerly known as Cottage-ville or Retreat Farm, is able to demonstrate the pastoral development of Bringelly from 1818. Although there is only a remnant (9.784 ha) of the original 1200 acre site (486ha), the homestead and farm buildings in their current setting with extensive views over rural land, is still able to demonstrate the principles of 19th century farm estate architecture, planning and design.
> Kelvin Park is significant for its association with a number of people and organisations of importance in NSW's cultural history, including Thomas Laycock Junior who established the farm at Bringelly, and later owners, John Thomas Campbell and Alfred Kennerley. The lease of the property by the Australian Agricultural Company, the country's oldest agricultural and pastoral development company established in 1824, is of particular significance.
>
> The homestead at Kelvin Park retains its colonial Georgian single-storey form and planning and is representative of a gentleman's rural residence of the 1820s. Despite some modifications it retains the architectural elements and character that make it a good example of its type. The kitchen wing and servants' quarters are modest examples of early colonial Georgian style architecture but similarly retain their original form and planning. All of these buildings are evidence of the establishment of a home and farm by Thomas Laycock.
> The brick coach house at Kelvin Park retains its picturesque, early Victorian form, planning and much of its original detailing. It is evidence of the development of the property in the 1850s by Alfred Kennerley, who later became Premier of Tasmania.

> The two slab barns are evidence of Kelvin Park as a working farm from 1818 until, at least, the mid-20th century. The structures demonstrate 19th century building methods and farm practice.
> The buildings at Kelvin Park belong to an important and rare group of colonial Georgian and early Victorian farm buildings that contribute to the historic rural landscape. They are evidence of continuity of land use for farming for 187 years (to 2005).
>
> The form of, and elements within, the garden, courtyard areas and entry to the property are evidence of the planning of the homestead complex by Laycock and subsequent owners and express the status they hoped to convey.
>
> The homestead of Kelvin Park retains important historic views to the east to Thompson's Creek and beyond to South Creek. The site also retains views of other historically related rural landscapes beyond the current boundaries such as the pasture and stands of trees to the north. Both views contribute to the site's significance and maintain the context of the homestead group.
>
> Kelvin Park group, including the homestead complex and remnant of farmland is significant at local, regional, state and national levels. All areas of the site are considered equally significant. (FORM Architects, 12/2006, slightly modified, Read, S., 12/2006)
>
> NB: neither the above nor below statements address the archaeological potential of the site.
>
> The Kelvin Park site landscaping is a significant component of the Kelvin Park group. The early numerous tree plantings contribute to making the site a notable landmark in the area. The remaining details of driveways, fencing and entrances also contribute to the historic and social evidence provided by the site of its original patterns of occupation and use. The site is part of an intact early 19th century farm complex that is now rare within the wider urbanised environs of Liverpool. There is the potential to gain more information on the site from further archaeological and documentary research. (LEP listing/landscape).
> The setting of the house on a knoll above a creek, its remnant layout of early buildings and garden, and its fine, mature trees, particularly its variety of old pines, add greatly to the character and significance of the property. The garden and setting are considered to have regional significance (Perumal Murphy Wu, 1990)
> Built by Thomas Laycock junior, 1820, having received the Bringelly grant in 1818. He returned to Australia in 1817 after fighting for England in the American War of 1812. An early house of quality and rich historical associations being one of the charming country houses of the 1820s. It is well-sited above Thompson's Creek and is surrounded by a beautifully landscaped garden. (AHC, 1998)

7.3.2 The Church of the Holy Innocents

The following statement of significance is quoted from the State Heritage Inventory form for 'The Church of the Holy Innocents' (Heritage NSW, last updated 2018).

> The Church of the Holy Innocents, churchyard, and cemetery is of state heritage significance because of its historical, associative, technical, aesthetic, research, rarity, and representative values. The church is the result of an unusual partnership of two prominent ecclesiastical architects: Richard Cromwell Carpenter, one of the leading English architects of the Cambridge Camden Society, and Edmund Blacket, the most prominent Australian ecclesiastical architect of the nineteenth century. It is the only church in NSW based on a design by Richard Cromwell Carpenter and only one of three in Australia. This church is one of the earliest Gothic Revival churches in NSW recognised as being correct in its medieval detail and thus, an important, rare and representative example of this new wave of church architecture. Its highly detailed, Gothic Revival design renders it remarkable in a state context as a small rural church. The church is also designed according to the principles of the Tractarian Movement, facilitating a change in liturgical emphasis from the pulpit and the spoken word, to the altar and the sacraments associated with a separate choir. The application of a Tractarian design in this small rural church embodies wider debates within the Church of England under Bishop Broughton. The church is also strongly associated with the main group of proponents of the Gothic

> Revival and Tractarian Movements operating in, or in association with, the Church of England during the 1840s in NSW: Bishop Broughton, Edmund Blacket, Reverend Horatio Walsh, and Reverend George Vidal.
>
> The church, churchyard, cemetery, and archaeological site are associated with several important pieces of legislation relating to the governance and position of religion, and specifically the Church of England, in colonial society during the early nineteenth century. As such, these original features and the church land is able to tell a story about the changing nature of religion and the position of the Church of England in the early colony. The retention of the semi-rural nature of the church, churchyard, and cemetery into the twenty-first century also demonstrates the historic rural landscape and isolation that made the finely designed Gothic Revival Church of the Holy Innocents a remarkable and rare place of worship.

7.3.3 Bringelly Public School

The following statement of significance is quoted from the State Heritage Inventory form for 'Bringelly Public school, Primary' (Heritage NSW, last updated 2004).

> The site demonstrates the history of education and settlement in the region. The classroom is representative of the simple, functional design of educational buildings from the late 19th/early 20th century. There is the potential to gain more information on the site from further architectural, archaeological and documentary research.

7.3.4 Cottage

The following statement of significance is quoted from the State Heritage Inventory form for 'Fibro House (Heritage NSW, last updated 2010).

> The dwelling is now a rare 20th Century survivor of the historical growth of Bringelly village, and which would be worthy of further historical research as to its associations with the Village centre.

7.4 Assessment of historical archaeological significance

Archaeological significance refers to the heritage significance of known or potential archaeological remains. While they remain an integral component of the overall significance of a place, it is necessary to assess the archaeological resources of a site independently from aboveground and other heritage elements. Assessment of archaeological significance is more challenging, as the extent and nature of the archaeological features is often unknown and judgment is usually formulated on the basis of expected or potential attributes.

The following significance assessment of the subject area's archaeological resource is carried out by following guidelines expressed in Assessing Significance for Historical Archaeological Sites and 'Relics' (Heritage Branch, Department of Planning, December 2009, now Heritage NSW, Department of Premier and Cabinet.

7.4.1 NSW Heritage Criteria

The NSW heritage criteria are assembled into the following four groups:

- Archaeological research potential (NSW Heritage Criterion E)
- Association with individuals, events, or groups of historical importance (NSW Heritage Criteria A, B & D)

- Aesthetic or technical significance (NSW Heritage Criterion C)
- Ability to demonstrate the past through archaeological remains (NSW Heritage Criteria A, C, F &G)

The above assessment criteria are supplemented by the established assessment framework that has been developed by Anne Bickford and Sharon Sullivan (1984), who set three fundamental questions to assist in determining the research potential of an archaeological site. These questions are as follows:

- Can the site contribute knowledge that no other resource can?
- Can the site contribute knowledge that no other site can?
- Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?
- As part of this preliminary assessment, a synthesised evaluation of significance is expressed in the statement below.

7.4.2 Archaeological research potential (NSW Heritage Criterion E)

The background research has indicated that there is a high potential to identify historical archaeological remains associated with Phase 6 (Late twentieth century development, 1945-2000). Evidence of the earthworks and aerial infrastructure across the study area are unlikely to provide additional information regarding the operation of the RAAF Bringelly site as most of the original, functional infrastructure has been removed.

The staff houses and RAAF infrastructure located around the Main Station Building site have the potential to include footing, demolition deposits, and services. These features are unlikely to shed light on the operation and occupation of the RAAF base. The staff houses are expected to have been standard Commonwealth residential buildings, similar to those found on other RAAF sites across New South Wales. Information gleaned from footings can already been gleaned from historic aerials that effectively show the layout of these buildings. Moreover, while these areas also have the potential to include isolated artefacts and artefact scatters associated with occupation and telecommunications, significant equipment and material associated with the military are expected to have been removed from the study area. The remaining artefacts are unlikely to provide significant information about the operation of the RAAF base that cannot be gathered from historical sources.

The archaeological remains associated with Phase 3 (Early settlement, 1805-1850), Phase 4 (Nineteenth century subdivision, 1850-1900), and Phase 5 (Early twentieth century development, 1900-1945) expected to be restricted to postholes and tracks. The research potential and value of identifying fence lines and postholes from these phases is very limited. As a result, archaeological evidence from Phases 3-5 do not meet the threshold of this criterion.

There is no archaeological potential associated with Phase 1, Phase 2, and Phase 7.

Associations with individuals, events, or groups of historical importance (NSW Heritage Criteria A, B & D)

The study area is associated with Australia's military preparedness during World War I and II. During Phase 5, the study area was associated with an Emergency Landing Group. However, there is no significant archaeological remains associated with the military site are expected to be located within the study area as all infrastructure was located to the east of Thompsons Creek.

During Phase 6, the site was occupied by the RAAF Bringelly Receiving Station which operated in tandem with RAAF Londonderry Transmitting Station and RAAF Glenbrook. While the study area is historically associated with the Royal Australian Air Force, this association is not considered a strong or special association in in NSW's cultural history. In addition, the archaeological remains of the RAAF infrastructure are unlikely to shed additional light on the use of the RAAF base during this period. As a result, the study area does not meet the threshold of significance under these criteria.

Aesthetic or technical significance (NSW Heritage Criterion C)

The archaeological features associated with Phase 6 are both known (surface) and unknown (subsurface). The visible archaeological remains primarily comprises earthworks, water management features, and aerial infrastructure. These features are standard for the period and do not show technical achievement or innovation. Moreover, the concrete pads and aerials are purely fictional in nature and have limited aesthetic qualities. These features do not meet the threshold of significance under this criterion.

The potential subsurface archaeological features associated with Phase 6 remains comprise the staff houses and RAAF infrastructure adjacent to the Main Station Building. Until investigations have been undertaken, their aesthetic or technical significance cannot be determined. However, as the archaeological remains are likely to be demolition deposits, services, and footings, they are unlikely to meet the threshold for this criterion. It is possible that individual, well preserved artefacts may have aesthetic significance.

The potential subsurface archaeological remains associated with Phases 3-5 comprise postholes and tracks. These features, if they survive, do not meet the threshold of aesthetic or technical significance.

7.4.3 Ability to demonstrate the past through archaeological remains (NSW Heritage Criteria A, C, F, & G)

The background research has indicated that there is a high potential to identify historical archaeological remains associated with Phase 6 (Late twentieth century development, 1945-2000). However, the types of archaeological remains are expected to have limited ability to demonstrate the past. Archaeological features from this phase are anticipated to comprise earthworks, aerial infrastructure, RAAF infrastructure, and staff housing. These feature types, namely landscape modifications, footings, demolition deposits, and services, are not expected to provide information that is not already readily available through historic aerials and RAAF records. Moreover, these features are representative of the requirements of radio telecommunications facilities for large and isolated sites capable of housing a dispersed antenna network. There are better, more intact representative of these kinds of purpose-built structures. As a result, the archaeological remains are not expected to meet the threshold of this criterion.

The archaeological remains associated with Phase 3 (Early settlement, 1805-1850), Phase 4 (Nineteenth century subdivision, 1850-1900), and Phase 5 (Early twentieth century development, 1900-1945) expected to be restricted to postholes and tracks. These anticipated archaeological features will not provide information that will assist in the historical understanding of 'Kelvin' or the development of the study area.

There is no archaeological potential associated with Phase 1, Phase 2, and Phase 7. No further assessment is required for these stages.

7.4.4 Summary

No historical archaeological potential has been identified for Phase 1 (Aboriginal occupation, pre-1788), Phase 2 (British exploration and survey, 1788-1804), and Phase 7 (Intensive development, 2000-present). As a result, there is no significance associated with these periods. The archaeological remains associated with Phase 3 (Early settlement, 1805-1850), Phase 4 (Nineteenth century subdivision, 1850-1900), and Phase 5 (Early twentieth century development, 1900-1945) expected to be restricted to postholes and tracks which do not meet the threshold of local significance. The archaeological remains associated with Phase 6 (Late twentieth century development, 1945-2000) are not expected to provide information that is not already readily available through historic aerials, historical records, or other telecommunications facilities. The archaeological evidence from Phase 6 does not meet the threshold of local significance.

8 Assessment of heritage impact

8.1 Built Heritage

The following section assesses the heritage impact of the proposed Master Plan, as outlined in Section 2 of this report.

Demolition / earthworks

To achieve the desired outcomes of the Bradfield City Centre Master Plan, the study area will be subject to demolition and earthworks for the clearing of the site. Much of the land to the north, south and east of the study area consists of green fields and contains no built elements of heritage significance.

Remnant structures associated with the RAAF's historical occupation of the area, notably the Main Station Receiving Building and Receiving Tower, have already been demolished as part of the Sydney Metro Western Sydney Airport Line. As determined in Section 7.2, these elements had some historic and rarity values; however, they did not meet threshold for heritage listing at the state or local level.

As there are no heritage items contained within the study area, the resulting demolition works for the Master Plan will have no direct physical impact to elements of heritage significance. The works are considered acceptable and will have no impact to heritage fabric.

New work

The proposed Master Plan indicates the subdivision pattern and land zone for the Bradfield City Centre. This includes the retention of existing vegetation and open space along the south and southeast of the study area along Thompsons Creek, with medium to high density development proposed for the centre of the study area around the new Metro station. Some smaller open public green spaces are also proposed within the proposed urban landscape.

Although there are no heritage items within the study area, the Bradfield City Centre is located in the vicinity of the State heritage listed homestead, Kelvin. This item will require appropriate planning controls to ensure that future development will not adversely impact its identified heritage values. It is important the setting is understood so that future changes in the area respond sensitively to the existing character and achieve a positive heritage outcome.

The Master Plan has made a considered effort to reduce and limit the potential impacts of this work through the design of a sensitive pattern of subdivision, which incorporates key views to the Kelvin homestead into the road alignments, and retention of public green spaces along Thompsons Creek. The land surrounding Thompsons Creek will be designated a regional parkland for recreational use.

While the limit of the development proposed is at a suitable distance from the state heritage listed homestead, Kelvin, future planning and design stages must consider the bulk, scale and height of buildings within the vicinity of this item. Strong DCP controls will be required to ensure that any future development is of a scale and character suitable to the heritage significance. Planning controls will need to respond to the scale, form, massing, setback, and materiality as the development of the city centre has the potential to

impact on setting, with potential risks arising from overshadowing, scale, and massing along the eastern boundary of the study area.

The proposed Master Plan is assessed as having no direct physical or visual impacts to identified heritage items. However, the resulting development of this Master Plan is likely to have an indirect visual impact on the setting of Kelvin. This is assessed as having a minor adverse impact on the heritage significance of this item. Consideration to detailed design in later phases of development must consider ways in which this impact can be further mitigated and reduced.

8.2 Views and settings

The proposed Master Plan situates the new Bradfield City Centre within an expansive rural setting currently characterised by long grasses, low lying scrub and mature trees conserving remnant vegetation. This landscape is further defined by large rural residential allotments which front Badgerys Creek Road. While the proposed development will significantly modify the existing rural character of the area, the Master Plan is consistent with the planning objectives projected for the area.

The proposed Master Plan has made a considered effort to minimise potential impacts on the character and amenity of the area through a considered approach to the built form. The Master Plan proposes a variety of scale, architectural design, and character in the built form to create an enhanced urban space. This will be crucial to the successfully delivery of this project. Creating an enhanced urban space will be supported by a varied height of buildings, consideration to through site links both a mix of pedestrian and vehicular, activated street frontages, inclusion of parkland and incorporation of greenery into building design.

While the impact of the proposed Master Plan on the setting is inevitable, careful consideration for future development within the vicinity of state heritage listed homestead, Kelvin, is required. It is recommended future development includes a transitional area between the heritage item and new development to ensure development is of a scale and character suitable to the heritage significance of Kelvin. Transitional areas should consider the topography and ensure buildings have a lower FSR and building height to minimise potential adverse impacts arising from overshadowing, scale and massing. This will assist in integrating the new development into the existing heritage landscape, reducing potential impacts to the views and setting that contribute to the broader visual curtilage and setting of Kelvin.

The proposed Master Plan, however, will have no impact on key views associated with the historic homestead. Important historic views which contribute to the significance of Kelvin include views to the east from the homestead to Thompsons Creek and beyond towards South Creek. The rural landscape to the north of the heritage item also contributes to its significance. The Master Plan for the Bradfield City Centre is limited to land west of the historic homestead and does not impede on these identified views illustrated in Section 5.3 (refer to Figure 29 to Figure 32).

Table 7. Summary of impacts to key views

View corridor identified in 2006 CMP	Impact of proposed Master Plan	Recommendation
View corridor 1: view northeast from bridge;	The proposed Master Plan will have no impact on this key view.	Retain and conserve.
View corridor 2: view east from The Retreat to the homestead and various farm buildings;	The proposed Master Plan will have no impact on this key view.	Retain and conserve.
View corridor 3: view northwest from Thompsons Creek to the homestead;	Views west from Thompsons Creek to the homestead may be impacted by the proposed Master Plan, in so much that development along the eastern edge of the	Include transitional areas between heritage items and new development.

View corridor 4: view west from Thompsons Creek to homestead;	study area may be higher than the ridgeline of the historic homestead and various farm outbuildings.	Future stages of detailed design will need to consider height of buildings, scale, setback, massing and materiality of any new development in the vicinity of the State heritage listed homestead, Kelvin.
View corridor 5: view southwest from Thompsons Creek to homestead	However due to the distance and topography, will not detract from the significance of this item. Potential impacts will be further mitigated through the recommendations contained within this report.	
View from homestead to Thompsons Creek	The proposed Master Plan will have no impact on this key view.	Retain and conserve.

8.3 Heritage items in the vicinity

There are four heritage items in the vicinity of the study area, two state heritage items and two locally listed items. They are:

- Kelvin (SHR Item #00046), 30 The Retreat, Bringelly
- Church of the Holy Innocent (SHR Item #02005), 130 Rossmore Avenue West, Rossmore
- Bringelly Public School Group, including schoolhouse and former headmaster's residence (#7 Liverpool LEP 2008), 101 Wentworth Road Bringelly 2556
- Cottage (#I2, Camden LEP 2010), 1186 The Northern Road Bringelly

Of the four heritage items, only one item is in the immediate vicinity of the study area and will be impacted by the proposed Master Plan. Due to the distance between the study area and the other heritage items in the vicinity, the proposed Master Plan will have no direct or indirect heritage impacts to the Church of the Holy Innocent, Bringelly Public School and Cottage. The proposed Master Plan is assessed as having no adverse impact on these items.

The historic homestead, Kelvin is located approximately 100 metres to the east of the study area. The proposed Master Plan will inevitably impact the views west from the homestead and farm outbuildings, as the retained rural qualities of the wider landscape have contributed to the extended visual curtilage of this item, beyond that which is contained in the SHR curtilage.

Impacts are limited to land located at the rear of this heritage item and at a suitable distance from key features of significance. The proposed Master Plan will not detract from the significance of the item, as it will remain legible in the landscape as an early nineteenth century homestead and farming complex. Furthermore, key views to north and east will be retained supporting the extended visual curtilage and setting of an item in a semi-rural setting. Several mitigation measures and recommendations have been provided in this report including the planning controls, sensitive building design, use of green spaces and heritage interpretation which provide opportunities to limit the impact of this Master Plan and provide a positive outcome from a heritage perspective. Any future development must be of a scale and character suitable to the heritage significance of Kelvin and supported by planning controls that respond to the scale, form, massing, setback, and materiality as the development of the city centre has the potential to have a moderate visual impact on setting.

The proposed Master Plan is assessed as having a minor adverse impact to the significance of Kelvin. While the wider landscape and rural setting of the heritage item will change, key landscape features that contribute to the setting will be retained and celebrated within the SHR curtilage.

8.4 Curtilage and subdivision

The proposed Master Plan has prepared an approach to the development of the Bradfield City Centre. The future development will result in the subdivision of the study area for the formation of a city centre with a mixed-use character. However, as there are no heritage items located within the study area, the proposed Master Plan would not result in any changes to the heritage curtilage of individual heritage items.

8.5 Historical archaeology

The proposed Master Plan works in Stages 1-3 are expected to impact the potential archaeological resources across the Bradfield City Centre Precinct. However, archaeological remains of the agricultural use of the study area during Phases 3-5 (Early settlement, 1805-1850; Nineteenth century subdivision, 1850-1900; Early twentieth century development, 1900-1945) are expected to be limited to fence postholes and tracks. These feature types are expected to have low research potential and no archaeological significance.

An analysis of the historical archaeological potential within the study area has identified a high potential for archaeological remains associated with the RAAF Bringelly Receiving Station (Late twentieth century development, 1945-2000). The remains, identified across the entire study area, are expected to comprise evidence of earthworks, RAAF infrastructure, and staff houses. The expected archaeological features have been assessed to hold low research potential and are unlikely to meet the threshold of local significance.

No historical archaeological remains are expected to be associated with Phases 1-2 (Aboriginal occupation, pre-1788; British exploration and survey, 1788-1804). No further assessment is required for these stages.

8.6 Compliance with relevant Conservation Management policies

Included below is a summary of CMP policies and their relevance to the project. The policies are quoted from the 2006 CMP for Kelvin Park prepared by FORM Architects.

Policy 5.2.1 Topography and landscape

1. Contours of the land within lots 2711, 2712 and 2713 are not to be altered.
2. The following fabric and attributes are essential to the Kelvin Park Group and should be retained in any future development.
    a. The relationship between the main homestead and its surrounding various outbuildings
    b. The Early Colonial Georgian style homestead
    c. The visually freestanding form of the building unobstructed by adjacent erections
    d. The open and uncluttered character of its surrounding landscape
    e. The visual relationship between the homestead and the main road, its garden, the West Thompsons Creek, its paddocks, attached and surrounding buildings and the pasture beyond.
    f. A palette of materials and finishes for external fabric drawn from the c.19 buildings, in particular reference to the surrounding outbuildings with combination of brick with timber panelling, timber framed windows and doors.

3. Future uses of the site should be compatible with the heritage of the Kelvin Park Group enabling it to retain a vital and important reference point for interpretation of the early settlement and users of the Cumberland Plain.

Extent Heritage comment

The proposed Master Plan will not detract from the relationship between key buildings retained within the SHR curtilage of the site. The homestead and associated outbuildings will remain legible within the evolving landscape as an early nineteenth century farming complex. The proposed Master Plan complies with the objectives outlined in this policy.

Policy 5.2.2 Subdivision

4. Any subdivision and subsequent proposed development must retain and protect the historic rural setting of the Kelvin Park Group and its surrounding views and vistas.

5. The land may be subdivided into four (4) lots to provide amenity and accommodation on 3 lots for the current owner's siblings. The retention of the subdivided land among the family group will facilitate future control over any proposed development. The remaining lot connects the property to Bringelly Road and will remain a connecting corridor for the foreseeable future.

6. No further subdivision shall be permitted. Any future change of ownership would be bound this document's policies.

Extent Heritage comment

The proposed Master Plan makes a considered effort to retain the rural character of the area through the incorporation of public green spaces into the design of the city. This is demonstrated through the retention of significant vegetation along Thompsons Creek into a regional parkland that extends along the southeast and southern border of the study area.

The development and uplift associated with the formation of a new city centre will have an inevitable impact on the rural setting surrounding Kelvin, however, will not detract from key landscape features within the SHR curtilage. While the new city centre will be visible, it is located to the rear of the homestead and does not impede on key views obtained from The Retreat or Thompsons Creek. The rural character of the area will be retained along Thompsons Creek, ensuring a continuous green corridor is maintained.

Policy 5.2.3 Views and Vistas

7. All works involved in planning the continued development of Kelvin Park and the subdivided properties should give consideration to the creation, retention and recovery of views and vistas to and from Kelvin. This objective should be progressively incorporated into any relevant development strategies. Refer to the site analysis Appendix A which highlight the important vistas from the main road, the Western Thompsons Creek as well as the views from the homestead to its surrounding.

8. No work on any of the lots created to impede or obstruct views or vistas to or from the homestead and the group of farm buildings.

9. Any proposed structure should be simple in form, maximum 2-stroey high with minimal decoration, coloured to merge with the landscape, shielded with vegetation and plantings as low key as possible. Any second storey should be wholly contained within the roof space.

10. For visual catchment which lies beyond the property boundaries, the topography and trees should be maintained. Screen plantings shall be placed among future development to conceal any structure from the visual catchment of Kelvin Park.

Extent Heritage comment

The view analysis included in Appendix A of the 2006 CMP has been considered in the views and setting assessment for Kelvin homestead as outlined in this report. The proposed Master Plan will see no change to key views identified within that assessment, as shown in Figure 29 and Figure 31. The visual catchment of the proposed Master Plan is limited to the west of the homestead complex, outside of any identified key views. The proposed development will transform this rural landscape, however, has made a considered effort to ensure the new city centre retains open green spaces and buildings or varied height and architectural character. Street trees and various screen plants are proposed and will support the greening of the new city. Recommendations and mitigation measures for related to building height, material, scale, form and character are considered in this report to minimise and reduce the visual impacts and are for consideration in later phases of detailed planning and design.

9 Assessment requirements and policy context

9.1 Master Plan Requirements

The DPE have issued Secretary's Master Plan Requirements (MPRs) to the Authority for the preparation of a Master Plan for Bradfield City Centre. This report has been prepared to address the following MPRs.

Table 8. Master Plan Requirements

Reference	Master Plan Requirement	Where addressed
Part A.12.	The draft master plan is to be accompanied by a Statement of Heritage Impact (SOHI), prepared in accordance with relevant guidelines and policies and must address the requirements outlined by Heritage NSW (Attachment A). The SOHI is to also consider the impact specifically on State Heritage listed 'Kelvin' and associated curtilage.	This report satisfies the requirements in MPR Part A.12.
Part A.14	The draft master plan is to consider the submissions from DPE - Environment and Heritage Group and Liverpool City Council (Attachment A).	Section 11.1 Table 9
Part A.16	The draft master plan must be prepared with consideration of the comments provided by DPE Environment and Heritage Group (Attachment A).	Section 11.1 Table 9
Part B. Reports and further information for the lodgement of the master plan	Statement of Heritage Impact, including the preparation of a heritage interpretation strategy; detail on view corridors/sight lines to and from Kelvin Park, and detail on Unexpected Finds Protocol, and protocol on if burial sites or skeletal material is uncovered during construction (Appendix 1).	This report satisfies the requirements of MPR Part B.

Table 9. Agency and Council Comments

Reference	Agency and Council Comment	Where addressed
Master Plan Request	*Liverpool City Council* Council acknowledges the following:	This report satisfies Council's request for a

	• The proposal includes the requirement to prepare a statement of heritage impact, an Aboriginal Cultural Heritage Assessment and a response to the Design for Country guidelines. • The statement of heritage impact will be required to include an assessment of the impact on Kelvin Park and the curtilage. Council would additionally request: • Ensure the masterplan and SoHI considers view corridors/sight lines from Kelvin Park as well as overshadowing impacts (if any). Key sightlines should be identified and maintained through the development of the development controls.	**Statement of Heritage Impact which includes an assessment of the impact on the historic homestead, Kelvin.**
Master Plan Request	*Heritage NSW* As delegate of the Heritage Council, Heritage NSW notes that a Statement of Heritage Impacts (SOHI) has been prepared for the Master Plan (Addendum to Master Plan Request; 1 July 2022). We support the Department's requirement that a SOHI accompany the Master Plan, and recommend that this includes: • 1. A study of the history of the place or site to identify potential heritage items or relics in the proposed Master Plan area. • 2. A review of local historical sources and maps to assess the potential for archaeological relics. • 3. The investigation of heritage significance within the site and surrounding areas (e.g., built heritage, conservation areas, landscapes, settings and views, and potential archaeological sites or relics). Heritage NSW provides the following as a guide https://www.heritage.nsw.gov.au/assets/Investigating-heritage-significance-2021-v2.pdf; a. This investigation should assess and include the relationship between the proposed project area and the State Heritage Register listed 'Kelvin Park Homestead' (SHR 00046) which is in close proximity to the east boundary of the site. • 4. A description and maps of the proposed works or activities including Reduced Levels according to Australian Height Datum (AHD). • 5. An assessment of the impact the Master Plan and any potential future proposed works will have on the identified significance of the site, its surrounding area and potential relics. a. The impact assessment should consider the tangible and intangible built heritage and broader landscape impacts to the surrounding area, including to the State Heritage Register listed 'Kelvin' (SHR 00046) and its curtilage area. • 6. Recommendations and measures to reduce or mitigate potential negative impacts of the proposed works. • 7. A strategy to manage the proposed works which takes into consideration: a. the overall nature of the site. b. the likelihood of relics. c. the nature and degree of impact from the proposed works.	**This report satisfies the requirements of Heritage NSW.**

d. the built heritage impacts to items in the surrounding areas such as the 'Kelvin' homestead (SHR 00046).

e. the visual and landscape impacts to the surrounding environment, heritage items and heritage views and vistas.

f. any opportunities for conservation and protection of environmental heritage values.

g. any opportunities for heritage interpretation at a broader landscape level, and at a localised level (e.g., views to the 'Kelvin' homestead (SHR 00046); and

h. any relevant conservation management plans (if applicable) that may be in place.

- 8. An Unexpected Finds Protocol that takes into consideration the unexpected discovery of heritage items or relics during works.
- 9. An outline of procedures to be followed if burials or skeletal material is uncovered during construction.

9.2 Environmental planning and assessment act 1979 (NSW)

The Environmental Planning and Assessment Act 1979 (NSW) (EP&A Act) requires that consideration is given to environmental impacts as part of the land use planning process. In NSW, environmental impacts are interpreted as including cultural heritage impact. Proposed activities and development are considered under different parts of the EP&A Act, including:

- Major projects (State Significant Development under Part 4.1 and State Significant Infrastructure under part 5.1), requiring the approval of the Minister for Planning.
- Minor or routine development requiring local council consent, are usually undertaken under part 4. In limited circumstances, projects may require the minister's consent.
- Part 5 activities which do not require development consent. These are often infrastructure projects approved by local councils or the State agency undertaking the project.

The EP&A Act also controls the making of environmental planning instruments (EPIs) such as Local Environmental Plans (LEPs) and State Environmental Planning Policies (SEPPs). LEPs commonly identify, and have provisions for the protection of, local heritage items and heritage conservation areas.

Extent Heritage comment

This assessment forms part of the supporting documentation for the Master Plan and meets the requirements for assessment of State significant development under part 4.1 of the Act.

9.3 Heritage Act 1977 (NSW)

The *Heritage Act 1977 (NSW)* (Heritage Act) was enacted to conserve the environmental heritage of NSW. Under section 32, places, buildings, works, relics, moveable objects, and precincts of heritage significance are protected by means of either Interim Heritage Orders (IHO) or by listing on the State Heritage Register (SHR), the statutory register under part 3A of the Heritage Act. Items that are assessed as having State heritage significance can be listed on the SHR by the Minister on the recommendation of the NSW Heritage Council.

The Relics Provision

Archaeological features and deposits are afforded statutory protection by the 'relics provision'. section 4(1) of the Heritage Act (as amended 2009) defines 'relic' as follows:

> any deposit, artefact, object or material evidence that:
>
> (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
>
> (b) is of State or local heritage significance.

The 'relics provisions' requires that no archaeological relics be disturbed or destroyed without prior consent from the Heritage Council of NSW. Therefore, no ground disturbance works may proceed in areas identified as having archaeological potential without first obtaining an Excavation Permit pursuant to section 140 of the Heritage Act, or an archaeological exception, or in the case of places listed on the SHR, an approval under section 60, or an exemption under section 57 of the Heritage Act from the NSW Heritage Council.

Extent Heritage comment

The proposal does not involve any works, impacts or changes to items listed on the State Heritage Register, nor is there any substantial potential to impact significant historic archaeological relics. Therefore, no approval by the Heritage Council of NSW or its delegates is required.

Although the proposed works are not expected to excavate or disturb land that will result in a relic being discovered, and do not require a permit, a stop works protocol should be implemented in the event of unexpected discovery.

9.4 State Environmental Planning Policy (Precincts-Western Parkland City) 2021

The *State Environmental Planning Policy (Western Sydney Aerotropolis)* was gazetted in September 2020 and came into effect on 1 October 2020. It applies to the land within the study area and provides statutory weight to the planning and development of land within the Aerotropolis. On 1 March 2022, the Western Sydney Aerotropolis SEPP was consolidated into the Western Parkland City SEPP. The Precinct SEPPs are based on the strategic planning vision in Sydney outlined in the 'Greater Sydney Regional Plan – A Metropolis of Three Cities. The 1,382-hectare Aerotropolis Core Precinct is one of six (6) precincts identified for early activation. Within this precinct, the first stage of city building, and the focus of this Master Plan, is the 115-hectare Bradfield City Centre.

With specific reference to heritage, section 26 of Chapter 4 of this SEPP includes objectives and controls for heritage conservation. In addition, the SEPP includes a list of heritage items within the initial Aerotropolis precincts in schedule 2 and an associated map. Of the items in the vicinity of the study area, two items, 'Kelvin' and 'The Church of the Holy Innocents' are listed as State-significant.

The objectives of the Aerotropolis SEPP pertaining to heritage conservation as per Clause 1 of Part 4, Section 28 are:

> to conserve the environmental heritage of the land to which this Policy applies,
>
> to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
>
> to conserve archaeological sites, and

to conserve Aboriginal objects and Aboriginal places of heritage significance.

Extent Heritage comment

Two items in the vicinity of the study area, Kelvin (Item #00046) and the Church of the Holy Innocents (Item #02005) are listed as state significant heritage items on the Aerotropolis SEPP 2020. This report, its assessment and recommendations fulfill the requirement of Clause 6, part 4, Section 28 of this SEPP and should be submitted as part of the Environmental Impact Statement for consideration by the Minister.

9.5 Western Sydney Aerotropolis Development Control Plan – Phase 2

The *Western Sydney Aerotropolis Development Control Plan*– Phase 2 (DCP Phase 2) provides controls to supplement the Western Sydney Aerotropolis Plan (WSAP), the Aerotropolis SEPP, the Western Sydney Aerotropolis Precinct Plan (Aerotropolis Precinct Plan) and inform the preparation and assessment of master plans and development applications (DAs). The DCP Phase 2 supersedes the *Western Sydney Aerotropolis Development Control Plan 2020 – Phase 1.*

The proposed works require assessment against the heritage controls set out in the DCP Phase 2. The Performance Outcomes and Benchmark Solutions outlined in the table below are the controls taken from Section 2.2.2 Non-Aboriginal and European Heritage of the DCP. The objectives of the DCP for matters relating to non-Aboriginal and European heritage are as follows:

O1. Ensure that development in the vicinity of heritage items is designed and sited to protect the heritage significance of the item and its setting.

O2. Ensure adequate protection and appropriate management of archaeological resources.

O3. Ensure that as much archaeology of Local, State, and potential National heritage significance is retained on site and interpreted within the new developments.

O4. Ensure the continued relevance of historic values through long-term heritage conservation outcomes that reflect the history of the Aerotropolis area.

This report has included and responds only to controls that are relevant to the Bradfield City Centre Master Plan.

Table 10. Summary of relevant heritage policies from the Western Sydney Aerotropolis Development Control Plan Phase 2

Relevant Performance Outcome	Benchmark solution	Extent Heritage comment
P02. The impact of new development adjacent to or within the vicinity of a heritage item is minimised.	• 1. Development in the vicinity of a heritage item minimises the impact on the setting of the item by: a. Providing an adequate area around the building to allow interpretation of the heritage item; b. Retaining original or significant landscaping (including plantings with direct links or association with the heritage item);	The proposed Master Plan has made a considered effort to minimise potential impacts on the character and amenity of the area through a measured approach to the built form. The Master Plan proposes a variety of scale, architectural design, and character in the built form to create an enhanced urban space. Creating an enhanced urban space will be supported by a varied height of buildings, consideration to through site links both a mix of

	c. Protecting (where possible) and allowing the interpretation of archaeological features; and d. Retaining and respecting significant views to and from the heritage item.	pedestrian and vehicular, activated street frontages, inclusion of parkland and incorporation of greenery into building design. The State listed homestead, Kelvin is approximately 100 metres east of the study area's eastern boundary. The proposed Master Plan will see no impact to original or significant landscaping associated with the heritage item. Although there are no key views to Kelvin from within the study area, views have been incorporated into the subdivision pattern and road alignment, enabling views east to the rear of the heritage item. Key views from the east and west of Kelvin will not be impacted by the proposed Master Plan.
•	2. Design of new buildings in the vicinity of heritage items should be of a contemporary design in recessive colours and materials that do not overwhelm any adjacent heritage items.	The Master Plan for the new Bradfield City Centre indicates the built form of the new city centre will showcase excellence in design, innovation and sustainability. Future development adjoining Kelvin Park will need to take into consideration the heritage sensitivities of the landscape in future planning stages. In later stages of design, consideration must be given to the significance of the State listed homestead Kelvin, to ensure any new development in the vicinity of the item is appropriate in terms of material, massing and scale. This includes the appropriate use of a material palette that includes sympathetic materials, colours and that do not detract or overwhelm the item.
•	3. Open spaces should be planned around heritage items to ensure it maintains its prominent siting and encourages opportunities for active and passive interaction with the place.	At this stage the Master Plan consists of ample open space which encourages opportunities for active and passive interaction with the place. As the closest heritage item in the vicinity is 100 metres from the proposed new development, the siting of the heritage items has been thoughtfully considered is not impacted by this development.

	• 4. Highly activated urban areas in the vicinity of a heritage item must be carefully and respectfully sited, designed and landscaped to ensure protection of the heritage values of the heritage item.	The location and siting of Kelvin on a rise overlooking Thompsons Creek must be considered in the future detailed design of the Bradfield City Centre. The interface between the new development and heritage item must be consistent with the identified heritage values of the place. It is recommended transitional areas between the heritage item and development are designed so that the heritage values are protected. Transitional areas should consider the topography and ensure buildings have a lower FSR and building height to minimise potential adverse impacts arising from overshadowing, scale and massing. This will assist in integrating the new development into the existing heritage landscape, reducing potential impacts to the views and setting that contribute to the broader visual curtilage and setting of Kelvin.

9.6 Summary of Key Implications for Master Plan

The key implications for the Master Plan in relation to Non-Aboriginal heritage include:

- The study area is not identified as a heritage item on any statutory or non-statutory registers, nor does it meet the criteria for local or State significance.
- The proposed works will not directly impact on any identified built heritage.
- The assessed potential for the presence of archaeological material associated with all post 1788 occupational phases of the site are low within the works footprint. Any surviving remains are likely to have a low archaeological significance.
- There will be no direct or indirect visual or physical impacts to the Church of the Holy Innocent, Bringelly Public School and Cottage. The proposed Master Plan is assessed as having no adverse impact on these items.
- The proposed Master Plan is assessed as having a minor adverse impact on the setting and views for the State heritage listed homestead, Kelvin.
  - A transitional area between the heritage item and new development must be established to ensure development is of a scale and character suitable to the heritage significance of Kelvin. Transitional areas should consider the topography and ensure buildings have a lower FSR and building height to minimise potential adverse impacts arising from overshadowing, scale and massing.
  - Strong DCP controls will be required to manage development in the vicinity of the historic homestead, Kelvin. Strong planning controls will ensure that any future development is of a scale and character suitable to the heritage significance, and responds to the scale, form, massing, setback, and materiality.

10 Recommendations

The following recommendations have been prepared for the proposed Master Plan phase.

- Any new development should consider the SHR heritage item, Kelvin which is located in the immediate vicinity. Consideration should be given to the height, bulk, scale and material of new buildings. Recessive colours, adequate setbacks, the use of open space and landscaping are ways which the impacts to this heritage item can be mitigated. This consideration is important for the Stage 4 area of the Master Plan, which is the closest to the SHR Item (noting not the subject of this Master Plan application).
- It is recommended future development includes a transitional area between the heritage item and new development to ensure development is of a scale and character suitable to the heritage significance of Kelvin. Transitional areas should consider the topography and ensure buildings have a lower FSR and building height to minimise potential adverse impacts arising from overshadowing, scale and massing.
- It is recommended that a Photographic Archival Recording be undertaken for the site prior to any changes being made to record the existing site.
- There is the opportunity to develop a Heritage Interpretation Strategy for this project. This will ensure a holistic approach towards to the interpretation implementation so that the significant values heritage in the vicinity, ranging from various themes including natural, Aboriginal, colonial, and twentieth-century heritage, are appropriately represented and enhance each other cohesively. The Strategy would typically be subject to internal and external consultation to guide the final implementation.
- In regard to the management of historical archaeological remains an Unexpected Finds Procedure should be in place prior to the commencement of ground works (refer to Appendix 1 – Unexpected Finds Protocol).

10.1 Mitigation measures

Table 11. Summary of mitigation measures for the project.

Ref	Recommendation	Timeframe	Responsible
1	Any new development should consider the SHR heritage item, Kelvin which is in the immediate vicinity. Consideration should be given to the height, bulk, scale and material of new buildings. Recessive colours, adequate setbacks, the use of open space and landscaping are ways which the impacts to this heritage item can be mitigated. This consideration is important for Stage 4 area the Master Plan, which is the closest to the SHR Item.	During detailed design	WPCA
2	Undertake a Photographic Archival Recording of the study area prior to record the existing site.	Prior to commencement of works	WPCA
3	Develop a Heritage Interpretation Strategy for this project.	As soon as possible	WPCA

4	With regard to the management of historical archaeological remains an Unexpected Finds Procedure should be in place prior to the commencement of ground works (Appendix 1).	Prior to commencement of ground works	WPCA

11 Conclusions

This Statement of Heritage Impact has considered the potential impacts of the proposed Master Plan for the Bradfield City Centre on the known and potential heritage significance of heritage items in the vicinity of the study area. This report has addressed non-Aboriginal heritage matters only. The proposed Master Plan assessed within this report includes four stages of development. The subject of this application, Stage 1, comprises land located within the central and north-west quadrant of the Master Plan Site, centred around the future Sydney Metro Station.

The assessment of heritage impacts contained within Section 8 of this report has determined that the proposed Master Plan will have a minor adverse impact on the heritage significance of the State listed homestead, Kelvin. The proposed Master Plan will transform a portion of the rural landscape surrounding this heritage item. Although there will be no direct physical or visual impacts associated with this proposal, the proposed changes will have indirect visual impact. The proposed Master Plan will inevitably impact the views west from the homestead and farm outbuildings, as the retained rural qualities of the wider landscape have contributed to the extended visual curtilage of this item, beyond that which is contained in the SHR curtilage. Impacts, however, are limited to land located at the rear of this heritage item and at a suitable distance from key features of significance. The proposed Master Plan will not detract from the significance of the item, as it will remain legible in the landscape as an early nineteenth century homestead and farming complex. Furthermore, key views to north and east will be retained supporting the extended visual curtilage and setting of an item in a semi-rural setting.

This report has determined that the study area is not identified as a heritage item on any statutory or non-statutory registers, nor does it meet the criteria for local or State significance. The proposed works will not directly impact on any identified built heritage. An analysis of historic plans and historical aerial photographs demonstrates that the site was located within a portion of the former estate referred to as The Retreat and subsequently Kelvin and then Kelvin Grove. The estate operated primarily as a grazing property until the early 1950s at which time it was purchased by the Commonwealth and functioned as the RAAF Bringelly Receiving Station. The assessed potential for the presence of archaeological material associated with all post 1788 occupational phases of the site are low within the works footprint. Any surviving remains are likely to have a low archaeological significance.

While the proposed development will significantly modify the existing rural character of the area, the Master Plan is consistent with the planning objectives projected for the area. Several mitigation measures and recommendations have been provided in this report including the planning controls, sensitive building design, use of green spaces and heritage interpretation which provide opportunities to limit the impact of this Master Plan and provide a positive outcome from a heritage perspective. As such, the impacts to heritage are considered acceptable in understanding the positive outcomes of the proposed development for the wider community.

11.1 Approval and Notification Requirements

Heritage Act 1977 – As the works will not directly affect any items on the State Heritage Register and there is low potential for impacting on known or expected relics, no notifications, permits or approvals are required in accordance with the Heritage Act.

Environmental Planning and Assessment Act 1979 – This report fulfils the assessment requirements under the EP&A Act.

SEPP (Western Parkland City) 2021 – This report fulfils the assessment requirements under this SEPP.

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Appendix 1 – Unexpected Finds Protocol

Unexpected finds procedure

In the event that potential archaeological object(s) are encountered during construction, the following steps must be taken.

- STOP ALL WORK in the immediate vicinity of the archaeological object(s) and notify the Project Manager.
- Protect the archaeological object(s) using fencing to establish a 'no-go zone' around the object.
- Contact and engage a Heritage Professional (qualified archaeologist) who will carry out a preliminary assessment and recording of the potential archaeological object(s)
- If the Heritage Professional advises the object is not a potential Aboriginal object or significant historical relic, works will recommence in consultation with the Project Manager.
- If the Heritage Professional advises that the object is a significant historical archaeological relic, the affected area will remain protected from any further ground disturbance.
- The Heritage Professional will notify Heritage NSW about the discovery under s146 of the Heritage Act. No further ground disturbance work would be allowed in the location of the discovery until a response from Heritage NSW has been received.

Procedure for discovery of possible human skeletal remains

- If human skeletal remains are discovered, all works must cease, the area must be protected, and the NSW Police and Heritage NSW must be contacted. Any human remains must be assumed to be protected heritage items or a crime scene.
- Interpreting the age and nature of skeletal remains is a specialist field and therefore, an appropriately skilled archaeologist or physical anthropologist should be contacted to inspect the discovery site and recommend an appropriate course of action.
- Should Heritage NSW determine the remains to be of historic ancestry, the most appropriate course of action, which may include deviation of the construction works, or the careful removal of the remains and reburial elsewhere, would be decided in consultation with the Project Manager and the Heritage Professional (qualified archaeologist)
- Should the skeletal material prove to be of Aboriginal ancestry, notification of Heritage NSW (DPC) and the Local Aboriginal Land Council will be required. Notification should also be made to the Commonwealth Minister for the Environment, under the provisions of the *Aboriginal and Torres* Strait *Islander Heritage Protection Act 1984*
- Should the remains determined to be of non-human origin, construction works may proceed.

APPENDIX F

20230913 Aboriginal Engagement Outcomes Report

Western Parkland City Authority

Bradfield City Centre Master Plan Application

Aboriginal Engagement Outcomes Report

Prepared by GHD and Zion Engagement and Planning

September 2023

wpca.sydney

NSW GOVERNMENT

Acknowledgement of Country

Aboriginal people have had a continuous connection with the Country encompassed by the Western Parkland City (the Parkland City) from time immemorial. They have cared for Country and lived in deep alignment with this important landscape, sharing and practicing culture while using it as a space for movement and trade.

We Acknowledge that four groups have primary custodial care obligations for the area: Dharug/Darug, Dharawal/Tharawal, Gundungurra/Gundungara and Darkinjung. We also Acknowledge others who have passed through this Country for trade and care purposes: Coastal Sydney people, Wiradjuri and Yuin.

Western Sydney is home to the highest number of Aboriginal people in any region in Australia. Diverse, strong and connected Aboriginal communities have established their families in this area over generations, even if their connection to Country exists elsewhere. This offers an important opportunity for the future of the Parkland City.

Ensuring that Aboriginal communities, their culture and obligations for Country are considered and promoted will be vital for the future of the Parkland City. A unique opportunity exists to establish a platform for two-way knowledge sharing, to elevate Country and to learn from cultural practices that will create a truly unique and vibrant place for all.

Garungarung Murri Murri Nuru
(Beautiful Grass Country)
Artwork created by Dalmarri artists Jason Douglas and Trevor Eastwood for the Western Parkland City Authority

Version	Status	Date	Prepared By	Reviewer	Comments
0.1	WIP Draft	15/06/2023	J. Glasby, E. Davidson, C. Webb, M. Martin	L. Harding	
0.2	WIP Draft	23/06/2023	J. Glasby, E. Davidson, C. Webb, M. Martin	L. Harding	
0.3	WIP Draft	30/06/2023	J. Glasby, E. Davidson, C. Webb, M. Martin	L. Harding	
0.4	WIP Draft	13/07/2023	C. Webb, E. Davidson	L. Harding	
1.0	100% Final	24/07/2023	J. Glasby, C. Webb, E. Davidson	L. Harding	
2.0	Final	17/08/2023	J. Azucena (WPCA)	J. Azucena (WPCA)	
3.0	Final	13/09/2023	H.Gilvear (WPCA)	H.Gilvear (WPCA)	

Executive Summary

The Western Parkland City Authority (WPCA) is the NSW Government agency responsible for delivering, coordinating and attracting investment to the Western Parkland City. A key component of the WPCA's work is the delivery of the Bradfield City Centre. The Authority has been granted permission by the NSW Department of Planning and Environment (DPE) to prepare a master plan for the Bradfield City Centre.

This Aboriginal Engagement Outcomes Report (the Outcomes Report) has been prepared for Western Parkland City Authority (WPCA) by GHD and Zion Engagement and Planning (GHD/Zion). This report accompanies the Master Plan Application for the Bradfield City Centre submitted to the NSW Department of Planning Environment (DPE).

The Outcomes Report provides an overview of the engagement activities undertaken for the project between November 2022 and May 2023. The report includes:

- An overview of the engagement approach and activities
- Key outcomes from engagement
- Recommendations for Western Parkland City Authority's (WPCA) consideration and an overview of key next steps.

Engagement Approach

In late 2022, GHD/Zion worked with WPCA to support with their approach to designing with Country and response to the requirements in the *Recognise Country: Guidelines for development in the Aerotropolis* and *Western Sydney Aerotropolis Phase 2 DCP.* GHD/Zion engaged with Traditional Custodians to inform updates to the Bradfield City Centre Draft Master Plan and recommend next steps. The engagement approach was delivered through two phases outlined below:

- **Phase one: Listen and understand**- The objective of this phase was to introduce the project, build relationships with Traditional Custodians who are connected to and/or have responsibility for Country in the area, and refine the engagement approach. In this phase Traditional Custodians provided input into the draft connecting with Country design principles and the Master Plan responses. GHD/Zion facilitated a workshop with Traditional Custodians to provide Traditional Custodians with an opportunity to share their interests and aspirations for the project with WPCA.
- **Phase two: Inform and shape** - The objective of this phase was to undertake targeted engagement with Traditional Custodians to refine designing with Country outcomes in the Master Plan.

Engagement Summary

Phase one engagement activities were undertaken between October 2022 and December 2022. Feedback from phase one informed the engagement approach to phase two.

Table E.1 – Phase one engagement activities summary

Engagement activities						
Activity	Timing of activity	Number of participants				
		TCs	WPCA	GHD/Zion	Hatch	KPC
Walk on Country	19 October 2022	5	6	3	1	n/a
Review supporting documents	26 October 2022	9	n/a	n/a	n/a	n/a
Walk on Country debrief (TCs only)	3 November 2022	6	n/a	3	n/a	n/a
Walk on Country debrief (TCs & WPCA)	3 November 2022	6	8	3	n/a	n/a
Koori Perspectives Circle	25 November 2022	1	6	4	n/a	4

Phase two engagement activities were undertaken with Dharug and Dharawal Traditional Custodians between March 2023 and May 2023. Engagement outcomes for phase two informed the iterative update and refinement of the Draft Bradfield City Centre Master Plan. Some recommendations from phase two engagement have been actioned to inform the Draft Bradfield City Centre Master Plan submission for public exhibition.

Table E.2 – Phase two engagement activities summary

Engagement activities					
Activity	Timing of activity	Number of participants			
		TCs	WPCA	GHD/Zion	Hatch/Turf
Online workshop 1	7 March 2023	6	6	2	2
Online workshop 2	17 April 2023	6	5	4	1
Online workshop 3	15 May 2023	4	4	4	1
Review of Aboriginal Engagement Outcomes Report and provide inputs into the Recognise Country session	12 July 2023	7	3	3	1

Designing with Country Principles

Engagement outcomes and recommendations identified throughout phase one and two engagement activities informed principles of designing with Country in line with WPCA's four pillars for the Bradfield City Centre Master Plan including Green, Travel, Connect and Dream. These principles have been developed based on the engagement outcomes and recommendations presented in section 4.3 of this report.

Green

Table E.3 - Green pillar designing with Country principles

Theme	Designing with Country principles
Important places on Country	• **Waterways and places near water:** All places where water is present are important as they are places of connection but particularly Thompsons Creek and Moore Gully. • **Untouched green spaces:** Untouched green spaces allow Aboriginal people and the wider community to connect with Country and provide connectivity for flora and fauna. • **High points:** the elevated north-eastern part of the site is important for connecting across the site and reading Country. • **Culturally significant areas:** Protect areas of cultural significance through considered landscape design to allow access for mob and minimise impacts. • **All places:** All parts of Country are equally important.
Flora and Fauna	• **Tree species:** Mature trees should be retained where possible. If required, relocate groups of trees to retain tree families and deep root and earth connections. • **Bunya Trees:** Bunya Trees are important to Aboriginal culture and should existing Bunya Trees need to be removed, consider appropriately placed replanting for cultural practice and education opportunities. If Bunya Trees can be retained, use planting and fencing to limit human interaction. • **Green spaces:** Creation of green links and connected network from the Ridge Park that is not limited by transport corridors. • **Mature Trees:** Recognise the vital importance of mature trees and the role they play in groups of tree families. Identify opportunities for retention or relocation of mature trees.
Water	• **Balance:** Highlighted the importance of treating waterways with respect and striking a balance between respecting water and city needs. • **Respect:** Respecting where she (Country) wants to go, importance of creek lines and reeds for weaving.
Sky Country	• **Lighting:** Curating choices that limit impact of light pollution and retain people's access to the night sky. Needs to adapt to open spaces and upper levels of buildings whilst abiding by Crime Prevention Through Environmental Design (CPTED) standards. • **Ecology:** Important to consider lighting and solar access impact on ecological communities especially the Ridge Park, Moore Gully, and Thompsons Creek. • **The Ridge Park:** Important for appropriate setback provisions to manage privacy and overlooking into the park.

Reuse	• **Repurposing:** Trees removed can be repurposed by Aboriginal organisations and made into tools for Cultural activities including canoes and Traditional tools.

Travel

Table E.4 - Travel pillar designing with Country principles

Theme	Responses
Reviving culture	• **Cultural education:** The community would benefit from places and services that support education surrounding Country and culture for Aboriginal people and allow the building of cultural acknowledgement and appreciation for visitors.
Wayfinding	• **Navigation:** Implementing images and carvings into modes of active transport such as animals engrained in surface every few metres in footpaths.

Connect

Table E.5 - Connect pillar designing with Country principles

Theme	Responses
Authority and truth telling	• **Systems reform:** Revising the business-as-usual approach to involve Aboriginal people in decision making as much as possible and identify opportunities for increasing authority for Traditional Custodians. • **Acknowledgement of Traditional Custodians:** Celebrate Cabrogal people, acknowledge historical events and practice truth telling.
Language	• **Co-design:** Utilise opportunities for signage, naming places or landmarks in the built environment. • **Inclusive language:** To be developed in partnership with Traditional Custodians, being mindful language can change with context and the need to work broadly including various spelling. • **Wording:** Shifting away from language that can be interpreted as tokenism and cultural appropriation to more culturally appropriate terms including 'Cultural space' and 'Cultural facility'.
Cultural spaces	• **Network of spaces**: Cultural spaces can have varying purposes (i.e. education, gathering, cultural practice). Cultural spaces should be a network of complimentary spaces that meet the different needs of community. • **Cultural practice:** Important for cultural practice space to have all three connections – Country, water and sky. Also important for the space to enable privacy for mob to practice culture.

Dream

Table E.6- Dream pillar designing with Country principles

Theme	Responses
Traditional Custodian voices	• **Ongoing engagement:** Continue to engage and collaborate with Traditional Custodians to listen and respond to Country.
Opportunities for mob	• **Employment**: Seeking opportunities to enable employment of local mob through design, construction, implementation and ongoing management. • **Land management**: Seeking opportunities for partnerships for ongoing land management of green spaces and parklands to support caring for Country and healthy ecosystems.
Contemporary culture	• **Expression:** Enable Dharug people to express themselves as both historical people and people of the future. • **Technology:** Engage and collaborate with Traditional Custodians to leverage critical technological infrastructure in the project area to support Country, community and culture through education and ongoing management.

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Glossary of Terms

AS	Australian Standard
Aerotropolis	Western Sydney Aerotropolis
BC Act	Biodiversity Conservation Act 2016
CIV	Capital Investment Value
DA	Development Application
DP	Deposited Plan
DPE	Department of Planning and Environment
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
NSW Government	State Government for NSW
SEPP	State Environmental Planning Policy
RAP	Registered Aboriginal Party
TC	Traditional Custodian

References

Ref	Title	Author	Date
1	*The Draft Connecting with Country Framework*	*Government Architect NSW*	2021
2	*Aboriginal Engagement Strategy*	*GHD and Zion Engagement and Planning*	2023
3	*Recognise Country: Guidelines for development in the Aerotropolis*	*GHD and Zion Engagement and Planning*	2022

1 Introduction

1.1 Purpose of this report

This Aboriginal Engagement Outcomes Report (the Outcomes Report) has been prepared for Western Parkland City Authority (WPCA) by GHD and Zion Engagement and Planning (GHD/Zion). This report accompanies the Master Plan Application for the Bradfield City Centre submitted to the NSW Department of Planning and Environment (DPE).

The Outcomes Report provides an overview of the engagement activities undertaken for the project between November 2022 and May 2023. The report includes:

- An overview of the engagement approach and activities
- Key outcomes from engagement
- Recommendations for Western Parkland City Authority's (WPCA) consideration and an overview of key next steps.

In preparing this report consultation was undertaken with the following stakeholders:

- Dharug (Darug/Durug) and Dharawal Traditional Custodians
- WPCA Koori Perspectives Circle
- Government Architect NSW

All matters raised by stakeholders were considered to have been adequately addressed within the Master Plan Application or in the accompanying appendices. This Aboriginal Engagement Outcomes report should be read and considered in parallel with the *Bradfield City Centre Master Plan Designing with Country report*.

All Aboriginal Cultural Knowledges and Voices shared within this report are done so with the permission of the Traditional Custodians and cultural knowledge advisors engaged through this project. As a result, this report includes information pertaining to Indigenous Cultural and Intellectual Property (ICIP) rights belonging to Aboriginal communities and Traditional Custodians. ICIP rights are Indigenous heritage and should always remain with these peoples and groups and should not be reproduced without permission.

1.2 The Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,200-hectare region set to become Sydney's third city (within the Western Parkland City), and the gateway and economic powerhouse of Western Sydney.

The Aerotropolis comprises of the new Western Sydney (Nancy-Bird Walton) International Airport surrounded by five initial precincts which include the 10 Aerotropolis Core, Wianamatta– South Creek Northern Gateway, Agri-business and Badgerys Creek outlined in **Figure 1** below.

The final Aerotropolis planning package, including the Precinct Plan and State Environmental Planning Policy (SEPP) Amendment, was gazetted by DPE in March 2022 and the Development Control Plan Phase 2 was finalised in November 2022. These documents have been used to inform the preparation of the Bradfield City Centre Master Plan.

The proposed Master Plan Application for the site has also been prepared using the Western Sydney Aerotropolis Master Plan Guideline and Master Plan Requirements.

2 Bradfield City Centre

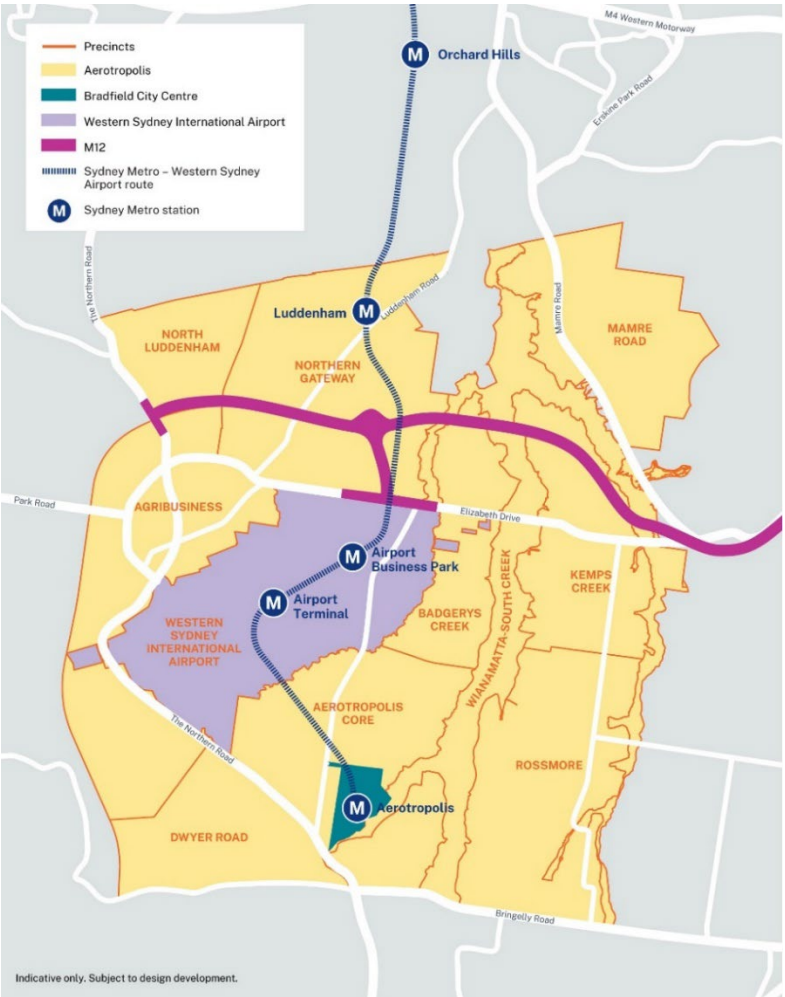
2.1 Strategic Context

The Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and The Northern Road (see **Figure 1** below).

The Sydney Metro Western Sydney Airport line runs through the site, providing connections from the key centre of St Marys through to stations at Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis which is located within the site.

The site is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and The Northern Road.

Figure 1 Strategic Context



Set on natural waterways, Bradfield City Centre presents a rare opportunity to showcase the best urban design and to create a thriving, blue and green, connected City in which Australians will want to live, learn and work. The Bradfield City Centre will be a beautiful and sustainable 22nd Century City. It will foster the innovation, industry and technology needed to sustain the broader Aerotropolis and fast track economic prosperity across the Western Parkland City.

2.2 The Master Plan Site

The street address for Bradfield City Centre is 215 Badgerys Creek Road, Bradfield (the Site) within the Liverpool City Council Local Government Area (LGA). The site is legally described as Lot 101 DP 1282949 and has an area of 114.6 hectares, with road access to Badgerys Creek Road located at the north-western corner. The site spans across the Aerotropolis Core and Wianamatta-South Creek Precincts, within Western Sydney Aerotropolis. The Site is outlined in **Figure 2** below.

The Site is predominantly zoned Mixed Use under the Western Parkland City SEPP, with a small portion of Enterprise zoned land located on the north-western corner of the site. The site also includes Environment and Recreation zoned land mostly along Thompsons Creek.

Figure 2 Master Plan Site

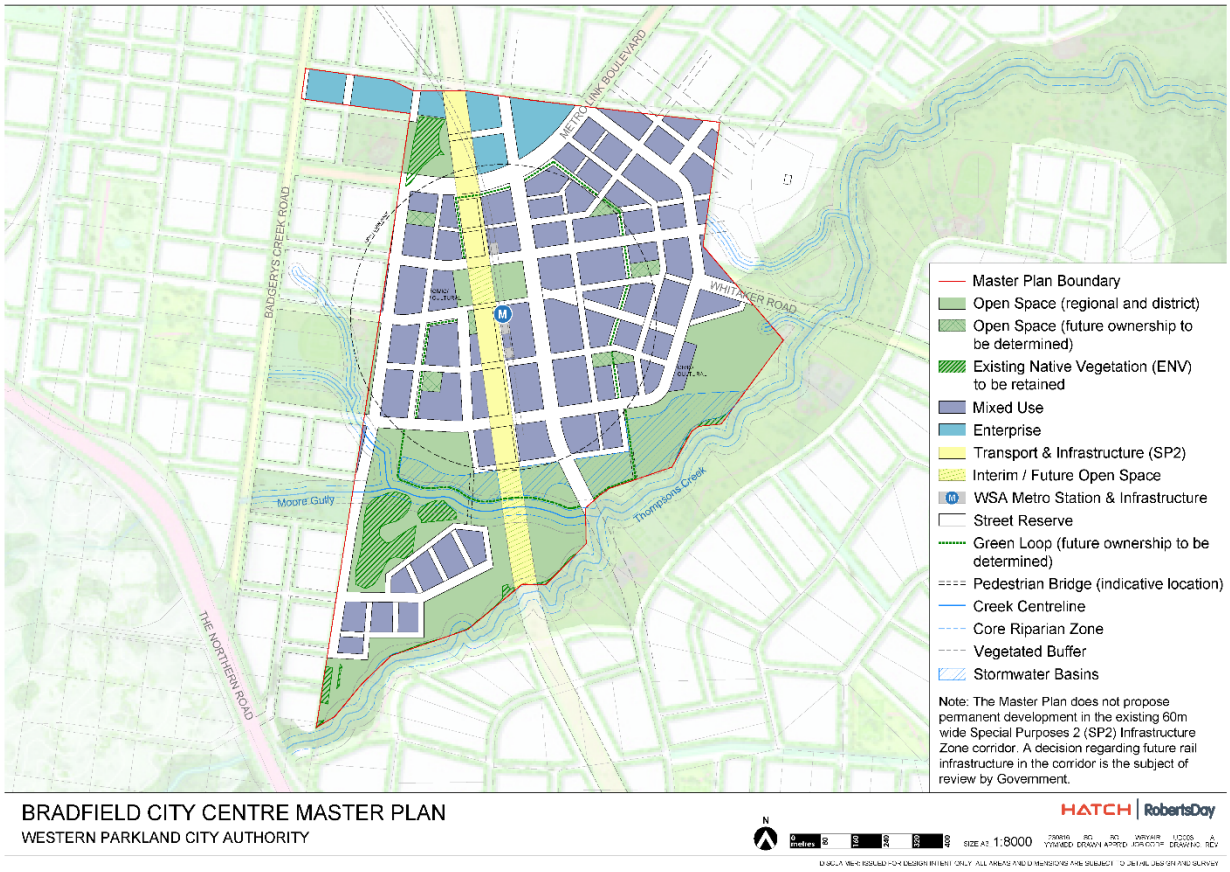
2.3 The Bradfield City Centre Master Plan

The Western Parkland City Authority (WPCA) has prepared a Master Plan (**Figure 3** below) in accordance with the DPE Master Plan Requirements.

The Master Plan sets out a framework for future development within the Bradfield City Centre which includes:

- Road network, key connectors to adjoining land and the regional road network (existing and future)
- Block structure
- Indicative open space network
- Sustainability strategy
- Social and infrastructure strategy
- Arts and culture strategy
- Infrastructure servicing strategy

Figure 3 Master Plan



2.4 The Proposal

The Bradfield City Centre Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons for technical assessments.

Table 1 - Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500 sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000 sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

3 Assessment Requirements and Policy Context

3.1 Master Plan Requirements

DPE have issued Master Plan Requirements (MPRs) to the WPCA for the preparation of a Master Plan for Bradfield City Centre. This report has been prepared to address the following MPRs.

Table 2 - Master Plan Requirements

Reference	Master Plan Requirement	Where addressed
General requirements	Demonstrate consistency with the Western Sydney Aerotropolis Plan, the Western Sydney Aerotropolis Development Control Plan – Phase 2 and relevant guidelines (such as Aviation safeguarding and Recognise Country)	This Aboriginal Engagement Outcomes Report
Key issues to be addressed	Recognise Country The draft Master Plan must demonstrate how future development will provide a meaningful connection to Country, informed by genuine engagement and cultural values research with the Dharug Traditional Custodians and other relevant local Aboriginal stakeholders, as required in the Stage 2 DCP and associated Recognise Country Guidelines. The draft Master Plan must be accompanied by: • an Aboriginal Engagement Outcomes Report, which outlines engagement activities undertaken with a range of Aboriginal stakeholder types and documents the findings • a Recognise Country Strategy (informed by the engagement outcomes) to outline how engagement outcomes have informed and influenced the development of the draft Master Plan as well as outline strategic objectives and	This report is the Aboriginal Engagement Outcomes Report. Designing with Country strategy is included in the Urban Design Report which had been informed through engagement outlined in this Outcomes Report.

	requirements for future development under the draft Master Plan to Recognise Country *Note: this can form part of the Aboriginal Cultural Heritage Assessment Report (see further detail below), Aboriginal Engagement Outcomes Report, or a separate appendix/report.*	

3.2 State Government Plans/Policies

Draft Connecting with Country Framework[1]

The Government Architect NSW Draft Connecting with Country Framework is a set of pathways, commitments, and principles for action intended to help form, design, and deliver government infrastructure including building projects such as roads, transport, and major public facilities. The Draft Framework outlines strategies to design for the health and wellbeing of Country by valuing, respecting and being guided by Aboriginal people. The Draft Framework asks people to think differently by using words that reflect physical experiences of Country. This includes:

- **Sensing:** Start with Country (project formation) Actively seek the sense of Country and understanding how Country feels. Country is everywhere.
- **Imagining:** Listen to Country (project design and conceptualisation) Listening to Country with the guidance of Aboriginal knowledge holders is a critical part of engaging with Country and with community. Listening invites responsibility to get the story (information) right while understanding the story changes over time.
- **Shaping:** Design with Country (project delivery) Both living and non-living ecosystems exist across Country. Making from and on Country respects and allows the relationships of Country to continue.
- **Caring for Country:** Maintaining Country (project maintenance) Once built on Country, all projects then belong to and are in a relationship with Country including buildings, roads and parks. Everything is connected.

The Draft Connecting with Country Framework is intended to support government, consultancies and developers who work with and engage Aboriginal communities on employment, design and cultural heritage. Implementing the perspectives of Traditional Custodians throughout the design process will deeply embed Aboriginal cultural values throughout the design and all subsequent phases of the project delivery.

3.3 Western Sydney Aerotropolis

To guide development of the Aerotropolis, a series of planning documents were developed by the Department of Planning and Environment which reflect the underlying NSW State Government strategic planning documents, particularly the Draft Connecting with Country Framework described in section 3.2 above. **Table 3** summarises all currently available planning documents developed for the Aerotropolis as relevant to the development of the Bradfield City Centre and Aboriginal Engagement.

Table 3 – Western Sydney Aerotropolis planning framework

Document	Relevance to Aboriginal engagement to inform the Master Plan
Western Sydney Aerotropolis Plan 2020	The Aerotropolis Plan sets the overarching objective for planning in the Aerotropolis to: *'Recognise Country – Acknowledge Traditional Custodians and provide opportunities to Connect with Country, Design for Country and Care for Country in the Aerotropolis'*
Western Parkland City State Environment Planning Policy (SEPP)	Planning instrument created under EP&A Act. Gives effect to the *Recognise Country: Guidelines for development in the Aerotropolis* for master planning applications.
Wester Sydney Aerotropolis Precinct Plan	Mandatory plan created under Chapter 4 of the Western Parkland City SEPP. Identifies known Aboriginal heritage sites, such as modified trees and grinding grooves, together with unusual and preserved landforms and culturally sensitive areas. The Aboriginal Engagement Outcomes report to inform the precinct plan also provides key principles and recommendations for consideration.
Western Sydney Aerotropolis Phase 2 Development Control Plan	Supports implementation of Precinct Plan and provides controls to guide development in the Aerotropolis. Phase 2 DCP requires development in the Aerotropolis to Start with Country and be informed and shaped by the narratives and qualities of Country to enable future landscapes and development to preserve and embody Country, community and culture.
Recognise Country: Guidelines for development in the Aerotropolis	These Guidelines seeks to ensure requirements outlined in the Western Sydney Aerotropolis DCP relating to culture and Country are met, as well as encourage the application of best practice throughout design and engagement processes. These guidelines are also given effect through the Western Parkland City SEPP.

4 Approach and outcomes

GHD/Zion worked closely with WPCA to prepare and deliver a meaningful engagement program with Aboriginal communities. This section provides an overview of the engagement planning, approach, and delivery.

4.1 Methodology Overview

In 2020, WPCA engaged Hatch Roberts Day (the design team) to prepare the Draft Bradfield City Centre Master Plan (the Master Plan). An Aboriginal design consultancy were engaged to provide inputs into the Master Plan, partner with the design team to inform their work, and to create a platform for discussion.

GHD/Zion attended two design workshops between November 2020 and March 2021 with WPCA. During these workshops GHD/Zion made recommendations based on engagement outcomes and principles identified during precinct planning and outlined in the *Western Sydney Aerotropolis Aboriginal Engagement Outcomes Report* (GHD/Zion, 2020) to inform the early master planning process.

In late 2022, GHD/Zion worked with WPCA to support with their approach to designing with Country and response to the requirements in the *Recognise Country: Guidelines for development in the Aerotropolis* and *Western Sydney Aerotropolis Phase 2 DCP*. GHD/Zion engaged with Traditional Custodians to inform updates to the Bradfield City Centre Draft Master Plan and recommend next steps. The engagement approach was delivered through two phases outlined in Table 4. Table 5 describes the engagement tools that have been used.

Table 4 – Methodology overview

	Phase	Objective
	Phase one: Listen and understand	The objective of this phase was to introduce the project, build relationships with Traditional Custodians who are connected to and/or have responsibility for Country in the area, and refine the engagement approach. In this phase Traditional Custodians provided input into the draft connecting with Country design principles and the Master Plan responses. GHD/Zion facilitated a workshop with Traditional Custodians to provide Traditional Custodians with an opportunity to share their interests and aspirations for the project with WPCA.
	Phase two: Inform and shape	The objective of this phase was to undertake targeted engagement with Traditional Custodians to refine designing with Country outcomes in the Master Plan.

Table 5 - Engagement tools

Engagement Tool	Purpose
Phone and email	• To establish and maintain two-way communication between Aboriginal stakeholders and the project team, share information about the project, answer questions and collect feedback. • Schedule meetings with stakeholders. • Identify additional stakeholders to be engaged.
Engagement collateral	• Provide information to assist with understanding the project. • Guide discussion and provide a point of reference.
Workshops (virtual)	• Foster higher project awareness in communities. • Allow for the greatest participation and flexible discussions.
Walk on Country	• Provide opportunity for Traditional Custodians to listen to and connect with Country. • Foster a culturally safe space and allow for deep listening.
Aboriginal Engagement Outcomes Report and Recognise Country Response Template	• Capture and record knowledge and information shared during engagement activities. • These documents have been shared with Traditional Custodians for their review and feedback prior to submission and exhibition. This process supports the protection of Indigenous Cultural Intellectual Property (ICIP).

4.2 Principles of engagement

GHD and Zion tailored the engagement approach based upon experience on previous Aboriginal engagement projects across Western Sydney. The approach was further refined based on themes and feedback received during phase one. The engagement approach was guided by GHD and Zion's leading practice principles for engagement with Aboriginal stakeholders, including:

- **Respect and cultural safety:** Foster an environment of respect and cultural safety.
- **Elevating the voices of Traditional Custodians:** Engage and elevate the voices of the Traditional Custodians, (particularly Dharug people) of the Aerotropolis area, those who have custodial responsibilities over Country.
- **Continued conversations:** With Traditional Custodians in the Aerotropolis area from past engagement activities. Manage and develop these relationships by building trust and rapport.
- **Flexible approach:** Develop culturally responsive approaches to engagement that adapt to the needs, preferences, availability, and capability of Aboriginal stakeholders.
- **Acknowledge and protect Indigenous Cultural and Intellectual Property:** To confirm how stakeholders want to be consulted and gain their consent to record the information they share. This will be achieved through sharing this Outcomes Report and the Recognise Country Response Template and confirming stakeholder's permission to reproduce this information.

4.3 Engagement activities and outcomes

The engagement approach was designed to be flexible and meet the needs and availability of stakeholders and community and to respond to constraints from COVID. The engagement was driven by GHD/Zion's leading practice principles for engagement with Aboriginal communities (section 0). The overall engagement approach was delivered in phases, as outlined in section 4.1. The activities and outcomes for each phase are summarised in the sections below.

4.3.1 Phase one: Listen and understand

Phase one engagement activities were undertaken between October 2022 and December 2022. The purpose of phase one engagement was to:

- build relationships with Dharug Traditional Custodians.
- build upon previous engagement outcomes, including engagement carried out between February 2020 and March 2021 for Aerotropolis Precinct Plans and design workshops between November 2020 and March 2021.
- provide opportunity for Traditional Custodians to share their aspirations and interests in the project.
- inform updates to the draft Bradfield City Centre Connecting with Country design principles, the Master Plan and recommend next steps.

The stakeholders engaged for phase one engagement activities included:

- Traditional Custodians – eight Dharug Traditional Custodians (which includes two Cabrogal Traditional Custodians) and one Dharawal Traditional Custodian
- WPCA Koori Perspectives Circle (KPC)
- The Government Architect NSW

Feedback from phase one informed the engagement approach to phase two.

Table 6 – Phase one engagement activities summary

Engagement activities						
Activity	Timing of activity	Number of participants				
		TCs	WPCA	GHD/Zion	Hatch	KPC
Walk on Country	19 October 2022	5	6	3	1	n/a
Review supporting documents	26 October 2022	9	n/a	n/a	n/a	n/a
Walk on Country debrief (TCs only)	3 November 2022	6	n/a	3	n/a	n/a
Walk on Country debrief (TCs & WPCA)	3 November 2022	6	8	3	n/a	n/a
Koori Perspectives Circle	25 November 2022	1	6	4	n/a	4

Table 7 – Phase one engagement activities outcomes

Engagement Outcomes			
Theme	Traditional Custodian feedback	Recommendation	Status
Use of language	• Identified sensitivities with the use and application of Aboriginal language. It is important to follow cultural protocols and undertake a robust engagement process inclusive of Traditional Custodians of the Country where the site is located. Use of language from other mobs and Country is culturally inappropriate. • Noted concern regarding the use of language in signage at the WPCA Bradfield City Centre site office without a consultation process with Dharug Traditional Custodians. • Noted concern regarding the use of language throughout Bradfield City Centre Master Plan documents without a consultation process with Dharug Traditional Custodians.	• Removal of language signage from the WPCA Bradfield City Centre site office. • Removal of language from all Bradfield City Centre Master Plan documents. • Consult Traditional Custodians around appropriate use and application of local Dharug language.	Removal of language from WPCA Bradfield site office and Master Plan documents – complete. • To be commenced following DPE approval of Draft Bradfield City Centre Master Plan.

Cultural considerations for the Master Plan	• Discussed the importance of engagement and input from Dharug Traditional Custodians, particularly Cabrogal Custodians, into connecting and designing with Country work undertaken on Dharug Country within the Bradfield City Centre. Noted it is culturally inappropriate for people from off Country to speak on behalf of Dharug Traditional Custodians. • Noted limited consultation with Dharug Traditional Custodians. • Concerns around the sensitivity of some information such as stories and language. • Noted support for some of the design outcomes and inputs into the Draft Master Plan provided by the Aboriginal consultancy.	• Recommend engagement with Dharug Traditional Custodians to refine designing with Country outcomes to inform the Draft Master Plan.	• WPCA has listened to the concerns raised during phase one of engagement activities with Traditional Custodians and committed to further engagement with Dharug Traditional Custodians to inform the Master Plan. • WPCA has worked with Traditional Custodians to refine designing with Country outcomes as described in section 4.3.2.
Opportunities	• Celebrate Cabrogal people, acknowledge historical events and practice truth telling. • Acknowledge and educate people that it is Dharug Country i.e., advocate to change the proposed 'Bradfield' suburb name to local language that is responsive to Country. • Enable Dharug people to express themselves as both historical people and people of the future. • Opportunity to champion the 5 C's of working well in partnership with Traditional Custodians: — **Convening** – bring together the right people to input into the projects. Dharug people to inform projects on Dharug Country. — **Communication** - continued communication between community and WPCA. — **Curation** - enabling opportunities for deep work together.	• Recommend engagement with Traditional Custodians to refine designing with Country outcomes to inform the Draft Master Plan. • Further partnership with Dharug Traditional Custodians, particularly Cabrogal people, beyond the scope of the Master Plan to explore wider aspirations. • WPCA to advocate for consistent approach to remuneration for Traditional Custodians working on projects across Bradfield City Centre (i.e. standard rate for all consultants engaged to undertake Aboriginal engagement).	• WPCA has worked with Traditional Custodians to refine designing with Country outcomes as described in section 4.3.2. • Once Master Plan is complete WPCA will continue broader conversations with Traditional Custodians regarding their aspirations.

	— **Championing** – advocating and supporting truth telling, allowing our voices into spaces. — **Capital** - Investing in Dharug mob to contribute and participate fully in projects. Consider the investment as economically proportional to the project and impacts to Country. • Embed resilience into the landscape, upskill the community, allow for space for cultural practice, and create a cultural immersion experience for visitors to the area. • Incorporate other dimensions of technology e.g., embed culture in 3D printing and create a digital twin city. Traditional Custodians acknowledge the large role of critical technological infrastructure in the project area. • Embellish the green corridor with cultural information and interpretations of water and sky, e.g. etching artworks onto bus shelters to allow the artwork to reflect onto different surfaces as the sun moves throughout the day.		
Concerns	• Connecting the green Central Park and down to the significant cultural area at Wianamatta. • Potential environmental damage and deaths in creeks and tributaries caused by fire-retardant chemical runoff into waterways. • Damage to ecosystems due to removal of food sources. • Trees that are objectified, sectioned off and isolated. Noted trees need other trees around them – they are a family. • Continuation of the current practice where notification of tree removal is provided after the removal. This kills the spirit of the tree and affects the resources that are collected for toolmaking.	• Recommend engagement with Traditional Custodians to refine designing with Country outcomes to inform the Draft Master Plan.	• WPCA has worked with Traditional Custodians to refine designing with Country outcomes as described in section 4.3.2.

4.3.2 Phase two: Inform and shape

Phase two engagement activities were undertaken with Dharug and Dharawal Traditional Custodians between March 2023 and May 2023. The purpose of phase two engagement was to:

- continue to build relationships with Dharug and Dharawal Traditional Custodians
- interrogate and refine designing with Country outcomes in the Draft Bradfield City Centre Master Plan
- establish guiding designing with Country principles in alignment with the four Master Plan pillars of Green, Travel, Connect and Dream
- Identify opportunities for ongoing engagement and collaboration with Traditional Custodians.

Engagement outcomes for phase two informed the iterative update and refinement of the Draft Bradfield City Centre Master Plan. Some recommendations from phase two engagement have been actioned to inform the Draft Bradfield City Centre Master Plan submission for public exhibition.

Table 8 – Phase two engagement activities summary

Engagement activities					
Activity	Timing of activity	Number of participants			
		TCs	WPCA	GHD/Zion	Hatch/Turf
Online workshop 1	7 March 2023	6	6	2	2
Online workshop 2	17 April 2023	6	5	4	1
Online workshop 3	15 May 2023	4	4	4	1
Review of Aboriginal Engagement Outcomes Report and provide inputs into the Recognise Country session	12 July 2023	7	3	3	1

Table 9 – Phase two engagement activities outcomes

Engagement Outcomes		
Traditional Custodian feedback	GHD/Zion recommendation	Status
Master Plan Documentation		
Use of terminology Concerns about using the term songlines in the document as they are culturally sacred and have important stories that sit behind them.	Remove or update of references to 'songlines'. Suggested terms include 'travel routes', 'pathways' or 'trading routes' to limit misuse of the term songline.	References to songlines throughout Master Plan documents and reports have been removed.
Use of language Careful consideration of the language used 'Ceremony space', 'Welcome to Country space' etc...noted this language is culturally sensitive and using these terms feels like appropriation.	Important to revise all reports and collateral to update the wording/language used to avoid tokenism and cultural appropriation. Consensus from the group is to use 'cultural space' and 'cultural facility' in place of leading names such as 'Ceremony space' and 'Welcome to Country space'. Commit to ongoing engagement with Traditional Custodians to identify the appropriate use and application of local Dharug language.	The term cultural space has been used to indicate locations for cultural practice.
Landscaping and urban design		
Restore waterways and ecology Restore Country (in relation to Thompsons Creek and the surrounding area) and maintain ecology.	Incorporate more direct reference to restoring Country and ecology in the 'green' principle. Specifically highlight importance of Thompsons Creek and other associated water systems and their important role in the city and ecology. Include more detail about the 40m core riparian zone and how it will be managed and approached to restore Country and ecology.	References to protecting and restoring Country have been integrated into the 'green principle'. More detail around an approach to riparian zones has been included.
Engaging with Country Provide opportunities for people to walk through Country and engage in recreation spaces.	Beyond just the pedestrian Green Loop, identify opportunities for people to be engaging with more natural parts of Country. Strengthen legibility of identifying green spaces that are left for Country to be Country. Not all green space should be active, need to allow Country to be restored.	A new plan identifies the Ridge Park, Moore Gully native vegetation and Thompsons Creek riparian corridor as distinct places to connect with Country and restore ecologies.
Protecting native flora and fauna Plant tree and species for human use e.g., a species of gum for asthmatics, native sarsaparilla for tea. Plant grasses that attract the	Review planting palette to ensure that species are endemic to this part of Country. Update planting palette within Bradfield City Centre Master Plan to include species that have specific uses.	The draft planting palette has been removed with a note to work more closely with Traditional Custodians to identify appropriate

grass parrot and other animals that use grass ecologies. Add the grass parrot to the list of bird species.	Update native species list within Bradfield City Centre Master Plan to include the grass parrot.	endemic species. The grass parrot has been included in the species list.
Bunya trees Noted the cultural significance of Bunya Trees in the area. The trees are tall and can be dangerous as Bunya pines fall from the branches. The trees need to have safety warnings and be planted away from green spaces for humans. Be intentional about planting tree and shrub species beneath trees such as prickly natives or hakea to prevent people from sitting under or climbing on trees. Less injury caused by falling branches/pines may reduce the need to remove trees.	Investigate the opportunity for the existing Bunya Pines to be retained within the Central Park. If they can be retained, use planting and fencing to limit human interaction under the trees and manage safety. Consider other less public spaces to plant Bunya Pines.	This has been communicated to WPCA and Sydney Metro project teams where the Bunya Pines where possible will be retained. Future planting of Bunya Pines in more secluded passive open space areas will be considered.
Connections for fauna Provide movement corridors and passages for fauna to travel across Country within Bradfield City Centre such as via tree ropes and overland bridges to provide connections for animals to travel across Country.	Identify spaces within the Master Plan where fauna connections are vital. Consider how fauna will move along Moore Gully and Thompsons Creek. Create green links and connections from the Ridge Park to other open space to mitigate isolated ecologies. Consider a connected network of green space that is not limited by transport corridors.	The Green Loop has been identified as an area for fauna movement with over/under street crossings being encouraged.
Respect of water Movement of water on Country should inform design and spatial decision making. It is important to design spaces to honour and respect water. Traditional Custodians are concerned about the misuse of water.	Develop Master Plan responses that highlight the importance of treating water respectfully. Strike a balance between the need to cool the city at the same time as respecting water. Remove reference to interactive water play in the Central Park and tactile water in the City Walks.	References to interactive water play have been removed from the designing with Country document. WPCA are committed to ongoing engagement with Traditional Custodians regarding the approach to the treatment of water across Bradfield City Centre.
Tree maintenance Design pedestrian pathways away from tree canopy to avoid branches falling and causing safety	Ensure that tree species selected for the more public spaces and pedestrian links do not create lots of issues with falling branches. Consider management approaches to ensure that trees are maintained and cared for to limit	Management of trees will be considered through detailed design phase.

concerns. This will reduce reasons to chop branches/trees down.	this risk should be considered. Important not to place pedestrian links around established trees that might be prone to losing branches.	
Tree canopy Traditional Custodians recognise there are targets and aspirations for tree canopy but raised concerns with implementation of significant canopy coverage and the use of new trees/non-native species.	Limit as much as possible the destruction and rebuilding of the landscape. Utilise the existing topography and trees/plants in the landscape. Where mature trees may need to be removed from other areas/sites in the Bradfield City Centre investigate the opportunity to be able to relocate these trees within their existing landscape. Opportunity to utilise these relocated mature trees to establish a connected tree canopy across open space areas (i.e. the Central Park or the Ridge Park) rather than planting young trees and waiting for them to grow and connect into a canopy. It would be important to consider the relocation of groups of trees to the same area in order to retain tree families and deep root/earth connections.	WPCA will look to utilise existing trees where possible.
Ridge Park		
Educational purpose Aspirations for the Ridge Park to be utilised for educational purposes. Some feedback regarding facilities included BBQ areas, change rooms attached to toilets, all weather outdoor covered learning space and plants for cultural practice. Consider access to the night sky for education and a viewing platform on the western side of the park was supported to access sightlines and see landmarks across Country. Ensure the tower is accessible for all abilities and views from the tower are protected and not blocked by future development.	Incorporate a covered outdoor learning area and Country viewing platform into the concept design for the Ridge Park. Commit to ongoing engagement with Traditional Custodians into the detailed design and implementation of the Ridge Park.	A Country viewing platform and outdoor learning area have been incorporated into the concept plan for the Ridge Park. WPCA are committed to ongoing engagement with Traditional Custodians to inform the Ridge Park design.
Privacy Increase privacy of community spaces and meeting places by relocating these closer to the centre of the park, away from adjacent buildings. Provide access to amenities at community spaces and meeting places. Investigate the projected impact of adjacent development lots on the park's access to view lines, sun,	Consider appropriate setback provisions around the Ridge Park to manage privacy and overlooking into the park. This should also include an assessment of solar access and relevant adjustments to ensure access to sky Country. Update the proposed concept plan for the Ridge Park to relocate viewing platform away from park edges and main roads.	Working within the existing boundaries of vegetation to be retained on the site , setbacks have been incorporated. The viewing platform has been located more centrally within the park. WPCA are committed

shade and sky Country. Embed darker planning methodologies to maintain the contrast of light to see sky Country.	Commit to ongoing engagement with Traditional Custodians into the detailed design and implementation of the Ridge Park.	to ongoing engagement with Traditional Custodians to inform the Ridge Park design.
Lighting and solar access		
Sky Country (night sky) Provide access to the dark night sky by avoiding unnecessary illumination of Country.	Consider the impact of light pollution and peoples access to the night sky. Ensure that illumination of the city is managed and contained to areas necessary for the function of the city. Outside these areas ensure that lighting levels and approach to the location of lighting is sensitive to flora and fauna who rely on darkness. Consider including lighting restrictions on upper levels of buildings to manage light pollution and access to the dark night sky.	Areas for connecting with Sky Country have been identified across the Master Plan. Areas of protected ecologies to have low levels of lighting and the impacts of light spill to these areas is to be minimised.
Light pollution Concerns around light pollution, illuminating Country and the effects of bright lights on the survival of ecology. Manage lighting to support and enhance ecology. Carefully consider the sensitivities of animals and birds, such as owls. Identify specific areas of Country that will feature low lighting and protect night habitats.	Create design provisions for open space to reduce the impact of lighting. Acknowledge this needs to be considered in terms of Crime Prevention Through Environmental Design (CPTED). Investigate lighting options that contain lighting and control lighting direction as to not impact ecological communities. This will be particularly important around natural green spaces such as the Ridge Park, Moore Gully and Thompsons Creek. Create a new plan that identifies low lighting areas of the city to support and enhance night ecologies.	Areas of low lighting have been identified across the Master Plan.
Solar access Concern regarding access to sunlight and view of Country within parks.	Consider the view corridors and solar access from parks to ensure that people are able to connect with Country and orientate themselves within spaces.	A plan including view corridors and solar access has been included.
Overshadowing Concerns around the impact of buildings overshadowing plants and trees.	Ensure that shadowing diagrams consider solar access for plants and trees throughout the city. Create buffers and setbacks to ensure that green spaces have adequate access to sunlight.	A plan including view corridors and solar access has been included.
Art strategy		
Prioritise local Dharug artists Need to ensure that opportunities for Dharug artists are prioritised.	Ensure that references to local artists include Dharug to create specific opportunities for Dharug people to be commissioned for artwork. Commit to ongoing engagement with Traditional Custodians and Dharug community	Promotion of Dharug artists has been included.

	to identify appropriate art opportunities.	
Wayfinding		
Planting treatments Traditional Custodians were generally unsupportive of introducing species from other Country for wayfinding purposes. Preferred use of animal symbols and footprints to indicate where certain animals were found on this Country.	Remove reference to the use of planting from other Countries used as wayfinding. Commit to ongoing engagement with Traditional Custodians in identifying specific animal symbols and footprints that would be appropriate for wayfinding purposes.	Reference to the use of planting for wayfinding has been removed. The use of animal symbols and footprints for wayfinding has been encouraged.
Use of language Language should be embedded across the city. Language is not currently mentioned under the 'Connect' theme. The 'Connect' pillar needs further consultation and design advice to identify the relevant story. Acknowledge Country in language e.g. "You are on Dharug Country", "Thank you for caring for Dharug Country"	Add language to the 'Connect' pillar and note that further consultation with community is required to identify appropriate language to use within the city. Commit to ongoing engagement with Traditional Custodians to identify the appropriate use and application of local Dharug language.	A reference to First Nations language has been included in the 'connect' pillar whilst highlighting the need to engage with Traditional Custodians.
Sightlines and navigation Conduct a sightline survey to inform cultural education, signage and wayfinding. Known highpoints in the surrounding area include Prospect Hill, Glenbrook Gorge and Dharawal Country Gorge. Work with Traditional Custodians to embed cultural education such as directional markers, representations of constellations on the ground, digital tools, natural learning spaces, cultural walks	Conduct a sightline survey to inform cultural education, signage and wayfinding. Identify opportunity and potential location for educational markers and wayfinding. Commit to ongoing engagement with Traditional Custodians to identify opportunities to incorporate cultural interpretation into wayfinding applications.	Sightlines have been prepared as part of the Bradfield City Centre Urban Design. WPCA will continue to consult with Traditional Custodians.
Cultural space		
Space for cultural practice Noted the need to identify a space for cultural practice for mob that is situated away from public recreation areas. This needs to be private and include facilities needed for gathering. Also noted it would be important for cultural	Prepare constraint maps and sections (i.e. transport easements, flood levels, building setbacks and view lines) would be useful to support discussions with Traditional Custodians in understanding opportunities. Potential for multiple locations to be identified for different uses. Commit to ongoing engagement with Traditional Custodians to refine location and	Constraints mapping was shared with Traditional Custodians in the development of a concept for a First Nations cultural space. A plan outlining the various cultural spaces has been developed.

space to have all three connections – Country, water and sky. Noted the feeling that all the good space in the regional parklands is taken by buildings and public spaces, with the remaining 'less desirable' spaces available for cultural use.	design of cultural space/s within Bradfield City Centre.	
Privacy Planting should be used as screening to create a sense of privacy within cultural areas.	Consider the need to include plants that could act as screening between major roads and public areas and cultural spaces.	An overarching plan clearly identifies the screening for privacy at cultural spaces.
Operation and management Important to consider operations and management of space. Questions were raised around the governance structure, maintenance, administration and operation. Might be that the Ridge Park is for mob only, or for broader cultural practice, and the Central Park is alternate use. Think about collective use of parks, not individual use. Manage grasses by enabling cultural burns and land management.	Important to have conversations with Council and other relevant authorities that may be involved in the ongoing operation and management of open spaces to identify plans, aspirations and opportunities for involvement/collaboration with Traditional Custodians and the Aboriginal community. Understanding the plans for operations and management will help to inform recommendations for not only the types of activities that can occur (i.e. cultural burns) but also how the collective utilisation of the open spaces can be planned and designed for.	WPCA are committed to ongoing engagement with Traditional Custodians as part of the future discussions and considerations of operations and management of space.
Establishing a network Provide Traditional Custodians with an overview of all proposed cultural sites/spaces within the Bradfield City Centre, the purpose of each and the combined value chain they create. Traditional Custodians are hoping to understand opportunity for spaces for cultural education in both the natural landscape and built environment.	Create a consolidated plan of the proposed cultural spaces within the Bradfield City Centre Master Plan. This should include the spaces and their purpose to provide a holistic view of what cultural spaces will be provided to manage duplication. There is opportunity to plan and design the open spaces to be different but complimentary - a connected network of not only green space but also of function and activity – e.g. Ridge Park could have a focus on education for the broader public, while the Central Park could have a focus on welcoming and transition/travel, and the regional parklands could be a focus on 'cultural space' for mob to connect to Country, water and sky.	An overarching plan clearly identifies the different uses and cultural spaces within the Master Plan.

5 Designing with Country principles

This section summarises the key themes and principles of designing with Country in line with WPCA's four pillars for the Bradfield City Centre Master Plan including Green, Travel, Connect and Dream. These principles have been developed based on the engagement outcomes and recommendations presented in **section 4.3**.

5.1 Green

Table 10 - Green pillar designing with Country principles

Theme	Designing with Country principles
Important places on Country	• **Waterways and places near water:** All places where water is present are important as they are places of connection but particularly Thompsons Creek and Moore Gully. • **Untouched green spaces:** Untouched green spaces allow Aboriginal people and the wider community to connect with Country and provide connectivity for flora and fauna. • **High points:** the elevated north-eastern part of the site is important for connecting across the site and reading Country. • **Culturally significant areas:** Protect areas of cultural significance through considered landscape design to allow access for mob and minimise impacts. • **All places:** All parts of Country are equally important.
Flora and Fauna	• **Tree species:** Mature trees should be retained where possible. If required, relocate groups of trees to retain tree families and deep root and earth connections. • **Bunya Trees:** Bunya Trees are important to Aboriginal culture and should existing Bunya Trees need to be removed, consider appropriately placed replanting for cultural practice and education opportunities. If Bunya Trees can be retained, use planting and fencing to limit human interaction. • **Green spaces:** Creation of green links and connected network from the Ridge Park that is not limited by transport corridors. • **Mature Trees:** Recognise the vital importance of mature trees and the role they play in groups of tree families. Identify opportunities for retention or relocation of mature trees.
Water	• **Balance:** Highlighted the importance of treating waterways with respect and striking a balance between respecting water and city needs.

	• **Respect:** Respecting where she (Country) wants to go, importance of creek lines and reeds for weaving.
Sky Country	• **Lighting:** Curating choices that limit impact of light pollution and retain people's access to the night sky. Needs to adapt to open spaces and upper levels of buildings whilst abiding by Crime Prevention Through Environmental Design (CPTED) standards. • **Ecology:** Important to consider lighting and solar access impact on ecological communities especially the Ridge Park, Moore Gully, and Thompsons Creek. • **The Ridge Park:** Important for appropriate setback provisions to manage privacy and overlooking into the park.
Reuse	• **Repurposing:** Trees removed can be repurposed by Aboriginal organisations and made into tools for Cultural activities including canoes and Traditional tools.

5.2 Travel

Table 11 - Travel pillar designing with Country principles

Theme	Responses
Reviving culture	• **Cultural education:** The community would benefit from places and services that support education surrounding Country and culture for Aboriginal people and allow the building of cultural acknowledgement and appreciation for visitors.
Wayfinding	• **Navigation:** Implementing images and carvings into modes of active transport such as animals engrained in surface every few metres in footpaths.

5.3 Connect

Table 12 - Connect pillar designing with Country principles

Theme	Responses
Authority and truth telling	• **Systems reform:** Revising the business-as-usual approach to involve Aboriginal people in decision making as much as possible and identify opportunities for increasing authority for Traditional Custodians. • **Acknowledgement of Traditional Custodians:** Celebrate Cabrogal people, acknowledge historical events and practice truth telling.
Language	• **Co-design:** Utilise opportunities for signage, naming places or landmarks in the built environment.

	• **Inclusive language:** To be developed in partnership with Traditional Custodians, being mindful language can change with context and the need to work broadly including various spelling. • **Wording:** Shifting away from language that can be interpreted as tokenism and cultural appropriation to more culturally appropriate terms including 'Cultural space' and 'Cultural facility'.
Cultural spaces	• **Network of spaces**: Cultural spaces can have varying purposes (i.e., education, gathering, cultural practice). Cultural spaces should be a network of complimentary spaces that meet the different needs of community. • **Cultural practice:** Important for cultural practice space to have all three connections – Country, water and sky. Also important for the space to enable privacy for mob to practice culture.

5.4 Dream

Table 13 - Dream pillar designing with Country principles

Theme	Responses
Traditional Custodian voices	• **Ongoing engagement:** Continue to engage and collaborate with Traditional Custodians to listen and respond to Country.
Opportunities for mob	• **Employment**: Seeking opportunities to enable employment of local mob through design, construction, implementation and ongoing management. • **Land management**: Seeking opportunities for partnerships for ongoing land management of green spaces and parklands to support caring for Country and healthy ecosystems.
Contemporary culture	• **Expression:** Enable Dharug people to express themselves as both historical people and people of the future. • **Technology:** Engage and collaborate with Traditional Custodians to leverage critical technological infrastructure in the project area to support Country, community and culture through education and ongoing management.

6 Next steps

Engagement outcomes summarised in **section 4.3.2** have informed a series of recommendations for WPCA's consideration in preparing the Master Plan. Additionally, there are recommendations that may be outside of WPCA's current planning requirements but may be relevant for future consideration or are outside of WPCA's remit but are for consideration by other government agencies or organisations.

The recommendations that should be considered for future planning and next steps, including detailed design and implementation, are summarised below.

Ongoing engagement with Traditional Custodians, Dharug community and other government agencies (where relevant) is recommended to:

- Increase Traditional Custodian authority in decision making processes.
- Inform the detailed design, implementation and ongoing management of green spaces, particularly the Ridge Park, the Central Park, Moore Gully and Thompsons Creek.
- Identify appropriate art opportunities for local Dharug artists.
- Identifying specific animal symbols and footprints that would be appropriate for wayfinding purposes.
- Identify the appropriate use and application of local Dharug language.
- Identify opportunities to incorporate cultural interpretation into wayfinding applications.
- Refine location and design of cultural space/s within Bradfield City Centre.

Western Parkland City Authority

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NSW GOVERNMENT

APPENDIX G

20230913 Earthworks Report

Western Parkland City Authority

Bradfield City Centre Master Plan Application

Earthworks

Prepared by AECOM

September 2023

wpca.sydney

NSW GOVERNMENT

Acknowledgement of Country

Aboriginal people have had a continuous connection with the Country encompassed by the Western Parkland City (the Parkland City) from time immemorial. They have cared for Country and lived in deep alignment with this important landscape, sharing and practicing culture while using it as a space for movement and trade.

We Acknowledge that four groups have primary custodial care obligations for the area: Dharug/Darug, Dharawal/Tharawal, Gundungurra/Gundungara and Darkinjung. We also Acknowledge others who have passed through this Country for trade and care purposes: Coastal Sydney people, Wiradjuri and Yuin.

Western Sydney is home to the highest number of Aboriginal people in any region in Australia. Diverse, strong and connected Aboriginal communities have established their families in this area over generations, even if their connection to Country exists elsewhere. This offers an important opportunity for the future of the Parkland City.

Ensuring that Aboriginal communities, their culture and obligations for Country are considered and promoted will be vital for the future of the Parkland City. A unique opportunity exists to establish a platform for two-way knowledge sharing, to elevate Country and to learn from cultural practices that will create a truly unique and vibrant place for all.

Garungarung Murri Murri Nuru
(Beautiful Grass Country)
Artwork created by Dalmarri artists Jason Douglas and Trevor Eastwood for the Western Parkland City Authority

Version	Status	Date	Prepared By	Reviewer	Comments
1	DRAFT	25/11/2022	AH	GAR	
2	DRAFT	29/06/2023	AH/AL	GAR	
3	Final	31/07/2023	AL	GAR	
4	Final	03/08/2023	JA (WPCA)	JA (WPCA)	
5	Final	17/08/2023	----	JA (WPCA)	
6	Final	12/09/2023	---	HG (WPCA)	

Executive Summary

The new Bradfield City Centre is located within the Western Sydney Aerotropolis, complementing the metropolitan cluster of centres including Penrith, Liverpool and Campbelltown and will be a diverse, dynamic and sustainable global city precinct supporting a curfew free airport, delivering attractive places for workers, residents and visitors. It has the potential to deliver 50,000 – 60,000 jobs, leveraging the positive economic impact of the Western Sydney International (Nancy-Bird Walton) Airport, creating Greater Sydney's next global gateway.

The Western Parkland City Authority (WPCA) is the NSW Government agency responsible for delivering, coordinating and attracting investment to the Western Parkland City. A key component of the WPCA's work is the delivery of the Bradfield City Centre. The WPCA has been granted permission by the NSW Department of Planning and Environment (DPE) to prepare a master plan for the Bradfield City Centre.

The Bradfield City Centre precinct is a greenfield site with no existing road infrastructure to materially inform overall precinct grading. As such AECOM has prepared the preliminary grading design of the site that considers existing topography, environmental controls (protected communities and flooding) and future infrastructure (Metro).

The purpose of this report is to present the proposed earthworks design strategy for the Bradfield City Centre and demonstrate an option for conformance with performance outcomes.

The works completed on this project provide a high-level assessment of the requirements of the masterplan grading of the Bradfield City Centre. This work has focused on vertical and horizontal geometry and earthworks staging. AECOM has prepared a 12D model to coordinate with existing and future environmental constraints.

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Glossary of Terms

AS	Australian Standard
Aerotropolis	Western Sydney Aerotropolis
AGRD	Australian Guide to Road Design
BC Act	Biodiversity Conservation Act 2016
CIV	Capital Investment Value
DA	Development Application
DP	Deposited Plan
DPE	Department of Planning and Environment
ENZ	Environment and Recreation
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
LEP	Local Environmental Plan
LGA	Local Government Area
NRAR	Natural Resources Access Regulator
NSW Government	State Government for NSW
SEPP	State Environmental Planning Policy
WPCA	Western Parkland City Authority
WSAP	Western Sydney Aerotropolis Plan
VENM	Virgin Excavated Natural Material
VRZ	Vegetated Riparian Zone

References

Ref	Title	Author	Date
1	*Biodiversity Conservation Act 2016*	*NSW Government*	*2016*
2	*Environment Protection and Biodiversity Conservation Act 1999*	*Commonwealth Government*	*1999*
3	*Detailed Site Investigation Report*	*ERM*	*2022*
4	*Dryland Salinity Map*	*ERM*	*2022*

1 Introduction

1.1 Purpose of this Report

This report accompanies the Master Plan Application for the Bradfield City Centre submitted to the Department of Planning and Environment (DPE).

The Western Parkland City Authority (WPCA) is seeking to secure a Master Plan approval for the Bradfield City Centre comprising of a 114.6-hectare site centred around a new Sydney Metro station.

Part 4.7 of the Western Parkland City SEPP sets out the statutory requirements for Master Plans in the Aerotropolis. In particular, Division 2, Section 4.41 of the Western Parkland City SEPP states that a Master Plan must:

> *(a) apply to an area of 100 hectares or more of contiguous land with at least 70% of the land owned by one person, and*
>
> *(b) specify the particular development that may be carried out as complying development on the land to which the master plan applies, and*
>
> *(c) contain development controls for the complying development, and*
>
> *(d) contain the matters required by the master plan guidelines.*

The proposed Master Plan for mixed-use development of the Bradfield City Centre comprises industrial, commercial, open space and residential uses surrounding a new Sydney Metro station.

The following sections introduce the site, context and nature of the Bradfield City Centre Master Plan.

All matters were considered to have been adequately addressed within the Master Plan Application or in the accompanying appendices.

1.2 The Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,000-hectare region set to become Sydney's third city (the Western Parkland City), and the gateway and economic powerhouse of Western Sydney.

The Aerotropolis comprises of the new international airport surrounded by ten (10) precincts which focus on advanced manufacturing, technology, research, training, education, freight and logistics, agribusiness, and mixed-use development.

The first phase of the Western Sydney Aerotropolis Planning Package was finalised in September 2020, and includes the *Western Sydney Aerotropolis Plan* (WSAP), *Western Sydney Aerotropolis (Aerotropolis) State Environmental Planning Policy* (Aerotropolis SEPP), Western Sydney Aerotropolis Precinct Plan (Precinct Plan) and the *Western Sydney Aerotropolis Development Control Plan (DCP) Phase 1*. The Initial Precinct Plans

released in November 2020 followed by the release of the Draft Phase 2 DCP in 2021.

On 1 March 2022, the Aerotropolis SEPP was consolidated into the State Environmental Planning Policy (Precincts – Western Parklands City) 2021 (Western Parkland City SEPP). The Aerotropolis Planning Package and supporting technical studies for the initial precincts was finalised on 25 March 2022. The Planning Package included amendments to the Western Parkland City SEPP and Aerotropolis Precinct Plan.

The proposed Master Plan Application for the Site has been formed by the requirements of the WSAP, Western Parkland City SEPP, Final Precinct Plan and the Draft Phase 2 DCP, as required by the Master Plan Guidelines.

2 Bradfield City Centre

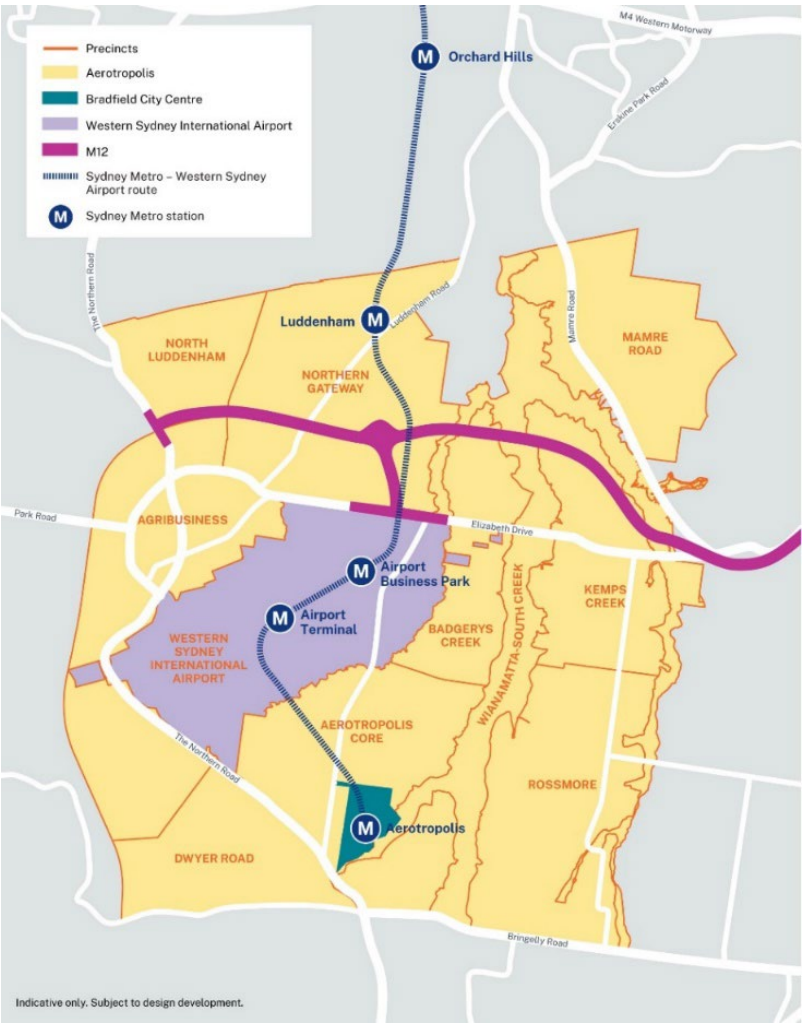
2.1 Strategic Context

The Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and The Northern Road (see **Figure 1** below).

The Sydney Metro Western Sydney Airport line runs through the site, providing connections from the key centre of St Marys through to stations at Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis which is located within the site.

The site is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and The Northern Road.

Figure 1 - Strategic Context



Set on natural waterways, Bradfield City Centre presents a rare opportunity to showcase the best urban design and to create a thriving, blue and green, connected City in which Australians will want to live, learn and work. The Bradfield City Centre will be a beautiful and sustainable 22nd Century City. It will foster the innovation, industry and technology needed to sustain the broader Aerotropolis and fast track economic prosperity across the Western Parkland City.

2.2 The Master Plan Site

The street address for Bradfield City Centre is 215 Badgerys Creek Road, Bradfield (the Site) within the Liverpool Council Local Government Area (LGA). The site is legally described as Lot 101 DP 1282949 and has an area of 114.6 hectares, with road access to Badgerys Creek Road located at the north-western corner. The site spans across the Aerotropolis Core and Wianamatta-South Creek Precinct, within Western Sydney Aerotropolis. The Site is outlined in **Figure 2** below.

The Site is predominantly zoned Mixed Use under the Western Parkland City SEPP, with a small portion of Enterprise zoned land located on the north-western corner of the site. The site also includes Environment and Recreation zoned land mostly along Thompsons Creek.

Figure 2 - Master Plan Site

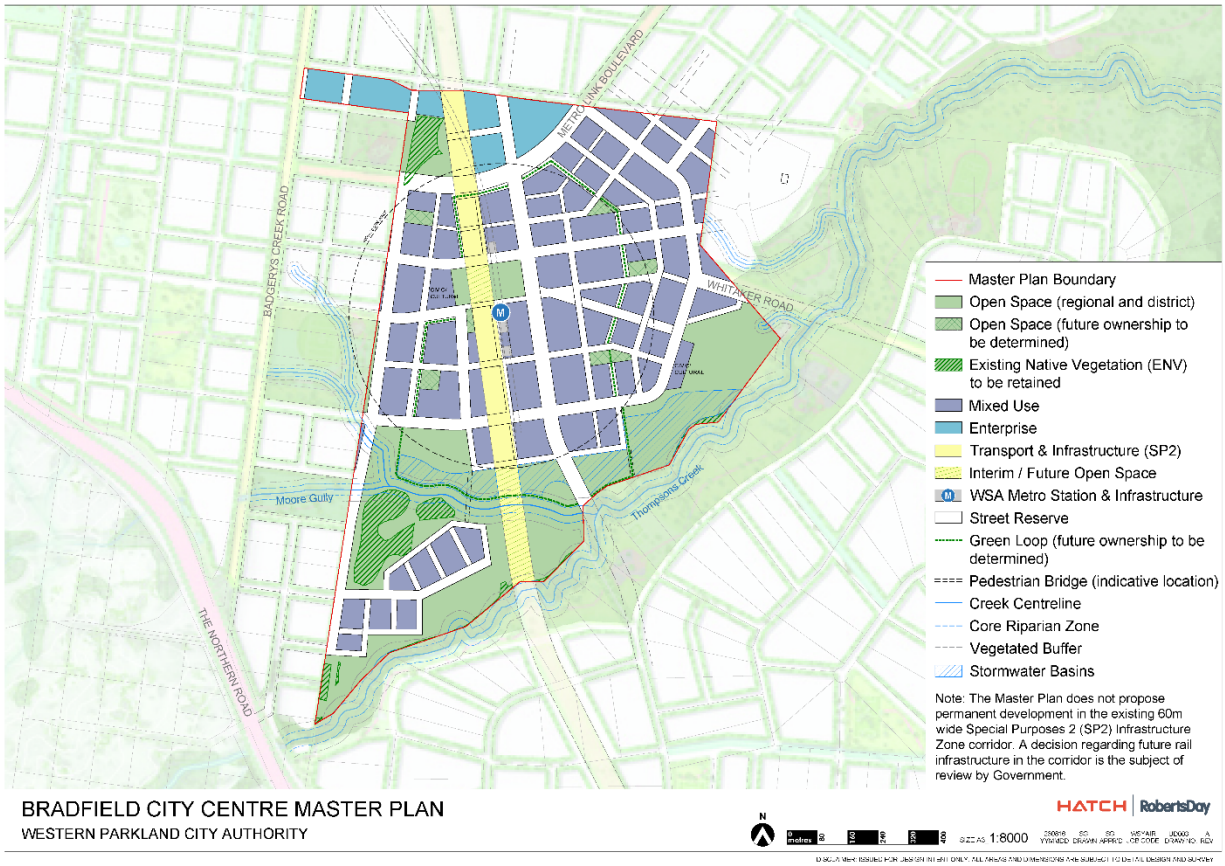
2.3 The Bradfield City Centre Master Plan

The Western Parkland City Authority has prepared a Master Plan (**Figure 3** below) in accordance with the DPE Master Plan Requirements.

The Master Plan sets out a framework for future development within the Bradfield City Centre which includes:

- Road network, key connectors to adjoining land and the regional road network (existing and future)
- Block structure
- Indicative open space network
- Sustainability strategy
- Social and infrastructure strategy
- Arts and culture strategy
- Infrastructure servicing strategy

Figure 3 - Master Plan



2.4 The Proposal

The Bradfield City Centre Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons for technical assessments.

Table 1 - Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500 sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000 sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

3 Baseline Investigations

3.1 Technical Baseline Site Consideration

Various site investigations and studies by external parties are also considered in the civil design of the Bradfield City Centre Master Plan as summarised in **Table 2.**

Table 2 – Baseline Site Considerations

Document	File Names	File Date	Date Received
Detail & Lidar Survey By RPS	PR146456-DET_001a.pdf PR146456-DET_001a.dwg PR146456-DET_001a.12daz	25 May 2020	03 Nov 2020
Land Tenure Mapbook – The Commonwealth Land By RPS	PR146456-1-LTMB.pdf and miscellaneous attachments	30 Jul 2020	03 Nov 2020
Lidar Survey – Extraction of Embankments, Thompsons Creek Bringelly By RPS	PR146456-DET_004a.pdf	25 Aug 2020	03 Nov 2020
Masterplan Cross Sections By Hatch | Roberts Day	Bradfield Street Sections.pdf L-0S- 001 -1 to 13 (.dwg)	04 Aug 2022 & 18 Aug 2022	18 Aug 2022
Masterplan Update By Hatch | Roberts Day	230605_WSY AIR_Master Plan-A3L_1_8000230605_WSY AIR_Master Plan - for issue	6 June 2023	6 June 2023
Ecological Community Mapping By Biosis	Biosis31717_HydroFeatures_Exported20201006.shp.zip Biosis31717_Veg_Exported20201006.zip Exported 20201006 DWGs.zip	06 Oct 2020	17 Mar 2022
Sydney Metro Western Sydney Airport Aerotropolis Station Concept Design by Architectus	Work Package 06	10 Dec 2021	01 Mar 2022
Detailed Site Investigation Report - draft	0571466_DSI_WPCA Bradfield_City Centre_DRAFT2 (1).pdf	29 Jul 2022	11 Nov 2022

3.2 Area of Focus

Key areas of focus for this report include:

- Site topography and natural grading
  - Mitigation of ecological impacts
  - Adjacent site and site boundaries
  - Creek crossing levels
  - Metro Station Access
- Earthworks Strategy
  - Required earthworks for each stage
  - Contamination and Salinity Assessment

4 Assessment Requirements and Policy Context

4.1 Master Plan Requirements

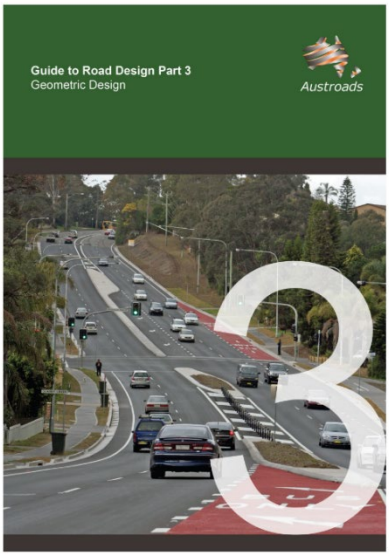
The DPE have issued the Master Plan Requirements (MPRs) to the WPCA for the preparation of a Master Plan for Bradfield City Centre. This report has been prepared to address the following MPRs.

Table 3 – Master Plan Requirements

Reference	Master Plan Requirement	Where Addressed
Key Issues to be Addressed - Section 19	Identify and quantify the required earthworks necessary to support the proposed development, and calculate the cut and fill for each relevant stage, zone, or area as necessary to support relevant planning applications, including the provision of a cut and fill plan	Section 6.2
	Demonstrate that cut and fill levels are not excessive and beyond that which may be required to facilitate the development, having regard to streetscape amenity	Section 6.2
	Discuss the earthworks strategy for any retention, import or export of materials, including the use of Virgin excavated natural material (VENM), including soil quality assessments	Section 0
	Address clause 4.9 of the Transport and Infrastructure SEPP for earthworks adjacent to protected transport corridors.	Section 6.5

4.2 State Government Plans / Policies

4.2.1 Austroads Guide to Road Design (AGRD)



The Austroads Guide to Road Design (AGRD) provides the designer with information necessary to develop safe and coordinated road alignments that cater for the traffic demand at the chosen speed. Transport for New South Wales (TfNSW) issued a supplement to AGRD Part 3 to clarify, add to, or modify the AGRD. The following AGRD and applicable TfNSW supplements have been considered in the preliminary civil design of the Bradfield City Centre Masterplan:

- Section 4.2.2 - Road Crossfall
- Section 7.4 - Horizontal Alignment Circular Curves
- Section 8 - Vertical Alignment

Refer to Section 6 of this Report for further assessment.

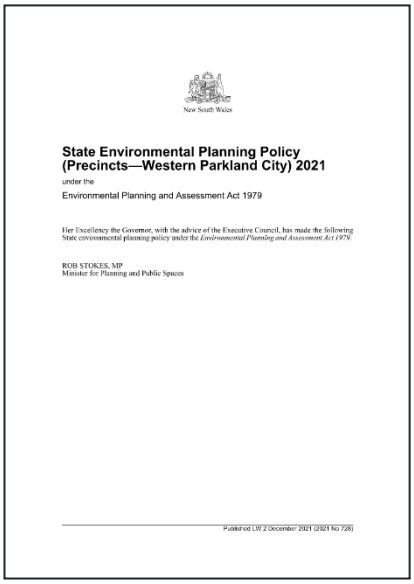
4.3 Western Sydney Aerotropolis

4.3.1 Western Sydney Aerotropolis Plan (WSAP), September 2020

The WSAP is a government strategic planning framework for the Western Sydney Aerotropolis and developed by the Western Sydney Planning Partnership, a local government-led initiative that brings Blacktown, Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly councils together with key State agencies. The plan includes landscape, urban design and planning principles to give effect to the objectives to promote productivity, sustainability, infrastructure and collaboration, and liveability.

The proposed landscape-led approach recognises the importance of blue and green infrastructure – major waterways, parks or green spaces – by retaining water in landscape, preserving and restoring the green, locating transit corridors within walking distance to landscape amenity, orientating urban development towards landscape amenity and transit corridors, and adopting urban typologies that ensure urban development retains water in landscape. The WSAP also emphasises Connecting with Country approach to sustainably manage Aboriginal culture and heritage in the built environment.

4.3.2 State Environmental Planning Policy (SEPP) (Precincts – Western Parkland City) 2021


New South Wales

State Environmental Planning Policy (Precincts—Western Parkland City) 2021

under the

Environmental Planning and Assessment Act 1979

Her Excellency the Governor, with the advice of the Executive Council, has made the following State environmental planning policy under the *Environmental Planning and Assessment Act 1979*.

ROB STOKES, MP
Minister for Planning and Public Spaces

Published LW 2 December 2021 (2021 No 728)

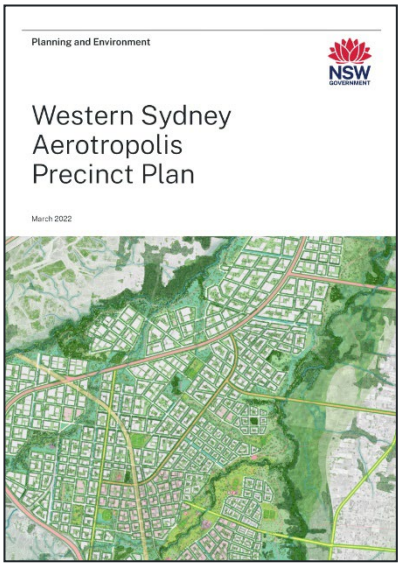
The SEPP (Precincts – Western Parkland City), an environmental planning instrument created under the Environmental Planning and Assessment Act 1979, commences on 1 Oct 2020. Chapter 4 Western Sydney Aerotropolis aims to facilitate development in the Western Sydney Aerotropolis in accordance with the objectives and principles of the Western Sydney Aerotropolis Plan, to promote sustainable, orderly and transformational development in the Western Sydney Aerotropolis, to protect, maintain and enhance, and to minimise the impact of development on, trees and vegetation, soil quality and the health of waterways and to contribute to the conservation of biodiversity, to recognise and protect the ecological and cultural value of Wianamatta–South Creek etc.

The following sections of the SEPP have been incorporated in the Civil design of the Bradfield City Centre Masterplan.

Part 4.4 Development Controls – General:

- Section 4.24 – Flood Planning
- Section 4.25 – Preservation of trees and vegetation in Environment and Recreation Zone and Cumberland Plain

4.3.3 Western Sydney Aerotropolis Precinct Plan, March 2022 and Technical Reports


Planning and Environment

NSW GOVERNMENT

Western Sydney Aerotropolis Precinct Plan

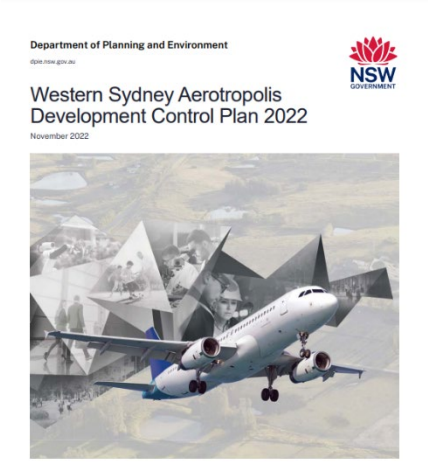
March 2022

The Precinct Plan is required under Part 4.7 of the SEPP (Precinct Western Parkland City). Any masterplan or development application must be consistent with the Precinct Plan objectives and requirements and demonstrate consistency with the DCP.

The following sections of the Precinct Plan have been incorporated in the Civil design of the Bradfield City Centre Master Plan:

- Section 2.4 – *provide for a mix of land uses that are compatible with the environmental characteristics of the Precinct and development constraints including flooding*.
- Section 4.5.4 – Biodiversity and Vegetation Corridors to protect the Cumberland Plain Woodland present across the Aerotropolis. It is critically endangered under *Biodiversity Conservation Act 2016* (NSW) and under *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth).

4.3.4 Western Sydney Aerotropolis Development Control Plan 2022 Phase 2 (DCP2), November 2022



The DCP2 provides controls to supplement the WSAP, Aerotropolis SEPP, Aerotropolis Precinct Plan, and inform the preparation and assessment of master plans and development applications. The DCP2 was endorsed by the Department of Planning and Environment in November 2022.

The DCP2 uses a flexible performance-based approach, by providing objectives, performance outcomes and benchmark solutions. Specific benchmarks incorporated into the Civil Masterplan design include:

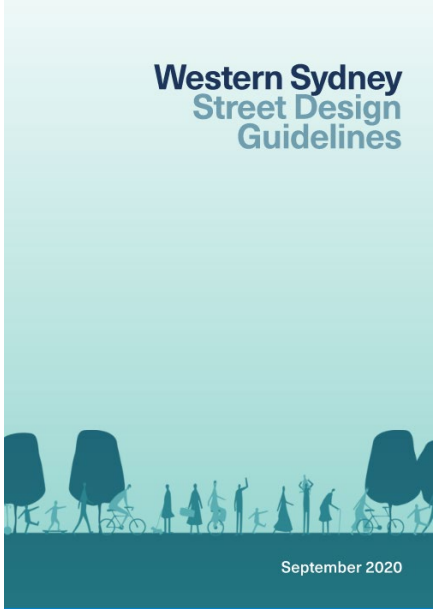
- Section 2.1.1 (P01) - Starting with Country to retain and connect existing topography as much as possible
- Section 2.5.3 (P01 – P04) - Salinity outlines performance benchmark solution to minimise disturbing high-risk saline soils to minimise movement of salt in the landscape, increase soil health and prevent soil structural decline

Table 4 – DCP2 Performance Outcomes: Recognise Country

Numeric Section	Performance Outcome	Benchmark Solution	Master Plan Consideration and Comment
	2.1.1 Starting with Country		
P01	The cultural values and heritage, waterways and landscapes of Country form a key structuring element of development. Development retains and connects and provides access to landscape elements including ridgelines, waterways and native vegetation.	1. For development where the Recognise Country Guidelines apply and in conjunction with Aboriginal heritage assessment requirements, cultural values research is to be undertaken by a qualified Aboriginal heritage consultant (with experience in Aboriginal heritage and cultural values research). Cultural values research must be undertaken in consultation with Traditional Custodians (including through an on-site review). Cultural values research must identify within the proposed development site and any adjoining areas: a. Cultural values and heritage significance, particularly within moderate to high areas of Aboriginal heritage sensitivity; b. Significant cultural landscape elements, as they relate to cultural values; and c. Significant waterways or bodies and areas of surrounding riparian vegetation as they relate to cultural values. 2. Development proposals must outline how findings of the cultural values research have informed the planning and design, including the spatial layout of the site and the public domain, including areas used for open space, stormwater management and or biodiversity conservation and outline any potential impacts and mitigation measures.	Proposed road topography seeks to retain natural topography as much as possible while integrating with key infrastructure features such as Aerotropolis Metro Station.

Numeric Section	Performance Outcome	Benchmark Solution	Master Plan Consideration and Comment
		3. Development is to respect and respond to: a. Identified significant sites, places, views, traditional movement corridors and narratives of Country; b. The natural landscape, including topography and native vegetation by providing clear and legible links (within the road network and public domain) between ridgetops and creek lines and retaining native vegetation clusters and corridors through the siting of buildings; and c. Natural systems, including significant tributaries and waterways in the Wianamatta-South Creek catchment by avoiding significant impacts to ecological condition and the function of ecosystems as well as protect and restore native riparian vegetation. 4. Development proposal design must ensure water management infrastructure and processes are responsive to Country and prioritise natural solutions that enhance the overall waterway systems condition, function and connections.	
	2.5.3 Salinity		
P01	The extent and location of salinity in the landscape and hydrogeologic regimes are accurately identified.	1. Undertake salinity investigations prior to development and prepare a Salinity Management Plan. 2. Where required, the Salinity Management Plan considers water application rates, size of the block and timing and management of irrigation to ensure overwatering and salt movement is minimised. 3. A detailed salinity analysis, to be prepared by a qualified expert, will be required if: a. An initial investigation shows the site as saline or affected by salinity; or b. The site of the proposed development has been identified as being a moderately saline area on the Western Sydney Potential Salinity Map.	Initial definition of site salinity risks are defined in **Section 6.3.2.** It is anticipated a more in depth assessment will be undertaken as part of future design stages.
P02	Development avoids disturbing high-risk saline soils to minimise the movement of salt in the landscape, increase soil health and prevent soil structural decline.	1. Demonstrate that disturbance to the natural hydrological system is minimised by: a. Maintaining effective drainage, or where modification occurs, the modification provides effective drainage systems; b. Reducing waterlogging on the site and the potential for waterlogging via landscape-led design; c. Having minimal impact on the water table; and d. Having minimal impact on the hydrogeologic regime for sub soils, lateral flows, and deep groundwater systems.	Initial definition of site salinity risks are defined in **Section 6.3.2.** It is anticipated a more in depth assessment will be undertaken as part of future design stages.
P03	Salinity management and codes of practise are adhered to and based on NSW and	1. Implement the following salinity management guidelines and codes of practise (or updates thereto) for land development (not limited to): a. Western Sydney Salinity Code of Practice (Western Sydney Regional Organisation of Councils, 2003).	Where appropriate it is anticipated a salinity management plan will form part of any

Numeric Section	Performance Outcome	Benchmark Solution	Master Plan Consideration and Comment
	local government guidelines.	b. Western Sydney Hydrogeological Landscapes: May 2011 (First Edition) data package. c. Relevant Australian Standards, including AS 2159, AS 2870, AS 3600, AS 3700 and AS 2870; and d. Local Government salinity initiative documents, including: i. Site Investigations for Urban Salinity; ii. Land Use Planning and Urban Salinity; iii. Building in a Saline Environment; and iv. Roads and Salinity. 2. Where soil sampling is required to be undertaken as part of salinity investigations, provide the following details: a. Location of investigation soil samples and bores on plan; b. Electrical conductivity (EC) and texture profiling down the soil profile; c. Density of sampling; d. Use of electromagnetic (EM) survey; and e. Preliminary block layout to allow for development plans to address salinity issues.	future earthworks strategy following evaluation of the site specific constraints
P04	Achieve healthy ecosystems by supporting soil ecology and support water retention in the clay landscape of the Cumberland Plain.	1. Retain undisturbed soil networks that occur in riparian corridors, parks, nominated streets and specially designed natural soil corridors	Works in riparian corridors are anticipated to consider site specific salinity risks where identified.



4.3.5 Western Sydney Streets Design Guidelines, September 2020

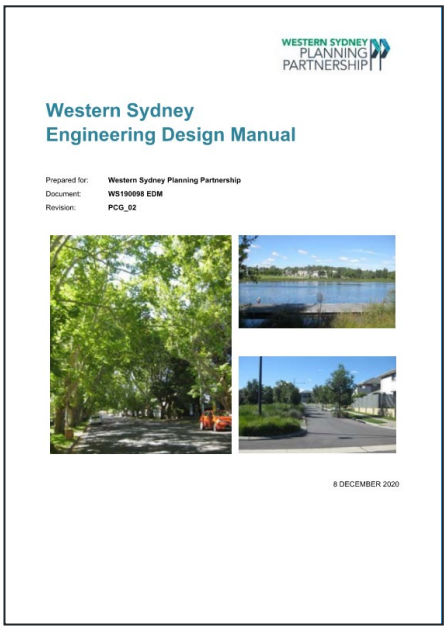
The Western Sydney Street Design Guidelines have been developed for the Western Sydney Planning Partnership as part of the Uniform Engineering and Design Standards project.

Specific requirements incorporated in the Civil Masterplan design include:

- Part B.3 – Street Types
- Part B.4 – Indicative Intersections
- Part C5 – Utilities

Refer to Section 6 of this Report for further assessment.

4.3.6 Western Sydney Engineering Design Manual, December 2020


WESTERN SYDNEY PLANNING PARTNERSHIP

Western Sydney
Engineering Design Manual

Prepared for: Western Sydney Planning Partnership
Document: WS190098 EDM
Revision: PCG_02

8 DECEMBER 2020

The Western Sydney Engineering Design Manual, along with the Western Sydney Street Design Guidelines, have been developed as part of the Uniform Local Engineering and Design Standards project. It has been prepared to enable designers, councils, and consultant teams to prepare compliant designs for civil infrastructure work, including landscaping of streets.

Specific requirements incorporated in the Civil Masterplan design include:

- Section 3 – Landform
- Section 4 – Streets
- Section 8 – Integrated Stormwater Management
- Section 9 – Flow Management
- Section 10 – Water Sensitive Urban Design
- Section 11 – Stormwater Drainage
- Section 12 – Trunk Drainage

Refer to Section 6 of this Report for further assessment.

5 Technical Approach / Framework

The Technical Baseline Site Consideration noted in **Section 3.1 Table 2** includes various site investigations and studies by external and internal parties that were considered in the preliminary civil design of the Bradfield City Centre Master Plan. Further details on the Technical Baseline Site Considerations:

- Detail and Lidar surveys with existing topography were used to serve as baseline for the new road vertical geometry in the focus area.
- Road layout, cross sections and hierarchy, as well as lot boundaries and open space allocations are based on the Masterplan Update and Masterplan Cross Sections provided by Hatch | Roberts Day – with the latest version being dated 05/06/2023 and 09/06/2023 respectively.
- Ecological Community Mapping, prepared by Biosis and dated the 6/10/2020, provided information on areas zoned as Environment and Recreation (ENZ) under Chapter 4 of the SEPP (Precinct Western Parkland City). Areas that are zoned as ENZ do not have biodiversity certification. As such – vegetation within these areas should not be removed without further tests of significance or triggering of the Biodiversity Offset Scheme.
- Further, the Sydney Metro Aerotropolis Station design (Sydney Metro – 15/07/2022) set the proposed finished floor level of the new Aerotropolis Metro Station plaza, which forms an important design input for the surrounding road levels.
- The draft Detailed Site Investigation (ERM 29/07/2022) has described existing soil conditions and notes that the groundwater within the Bringelly Shale is often saline and may be unsuitable for beneficial uses.

Based on the MPRs (Master Plan Requirements) and policy context summarised in Section 5, there are several considerations that have been made in the proposed masterplan grading and earthworks design. It is noted that design of main roads is subject to further detailed design as part of the next stage of works.

- In response to Connecting with Country, the design starts with existing site topography as the basis. This include establishing desired road high points and sag points based on existing drainage pattern and coordinating infrastructure with existing flood levels in Moore Gully and Thompsons Creek.
- The proposed Metro plaza finished floor levels have been set by Metro. These provide the primary access to the Metro station and in doing so form an input for the design of surrounding roads. Master Plan road centrelines have been developed to tie-in with 'gate line' levels.
- Road centrelines and major/minor roads are established based on Master Plan provided by Hatch | Roberts Day. Road vertical alignments are designed to relevant policy and technical controls for minimum and maximum longitudinal grades, vertical curves and alignments.
- Road crossing of creeks and streams have been based on achieving freeboard to existing flood level conditions. It is assumed these will be developed further based on detailed flood modelling and refinement through detailed design.
- Road centreline gradings must also align with policy and technical controls and to allow harmonious connection to the existing public infrastructure (Badgerys Creek Road).

There are several limitations and assumptions that must be noted in this report.

- A detailed lot grading has not been considered in this report. Instead, the lot gradings are a product of grading between road verges. This presents an opportunity to further refine the site cut/fill.
- Building footprints are also yet to be considered, except for Metro Station box and the AMRF First Building, for which development approvals have been obtained. Further design refinement will need to consider known building footprints and design levels to ensure that the proposed grading and drainage design is appropriately coordinated.
- At time of preparation of this Report, a detailed design for the Badgerys Creek Road update has not been completed. It is anticipated this should be reviewed in the context of road connections into the Bradfield City Centre Master Plan area as part of the future design refinement.

The following reviews are recommended as part of the next stage of works:

- Redefine lot gradings based on future detailed building designs.
- Coordination of bus stops, driveways, and individual tree plantings to ensure they will coordinate with the suggested stormwater pit placement.
- Future intersection signal designs must also be considered as well as kerb return radii to suit design and check vehicles.
- Intersections, driveways and pedestrian crossings will require sight distance checks taking into account landscaping and street furniture placements.
- Property/lot boundary splays to minimise obstructions within drivers' sight triangle.
- A review of bridge crossing levels will be undertaken following a detailed flood analysis to ensure that the crossing levels are adequate for flood events.
- Interface with road networks beyond the Bradfield City Centre Master Plan area to be further refined.
- Design for shared zones, shared paths and cycleway intersection treatments to be further developed.

6 Technical Assessment

6.1 Road Geometry

6.1.1 Design Criteria / Standards

The design criteria for the road geometry have been taken from the standards provided in **Section 4.2.**

Posted speed limits have also been assigned to roads in the precinct as shown in **Figure 4** below. These speed limits have also been considered in the design of the road geometry.

Table 5 in the next page summarises the road geometry standards adopted and associated design criteria.

Figure 4 - Posted Speed Limits (Source: Turf Design Studio)

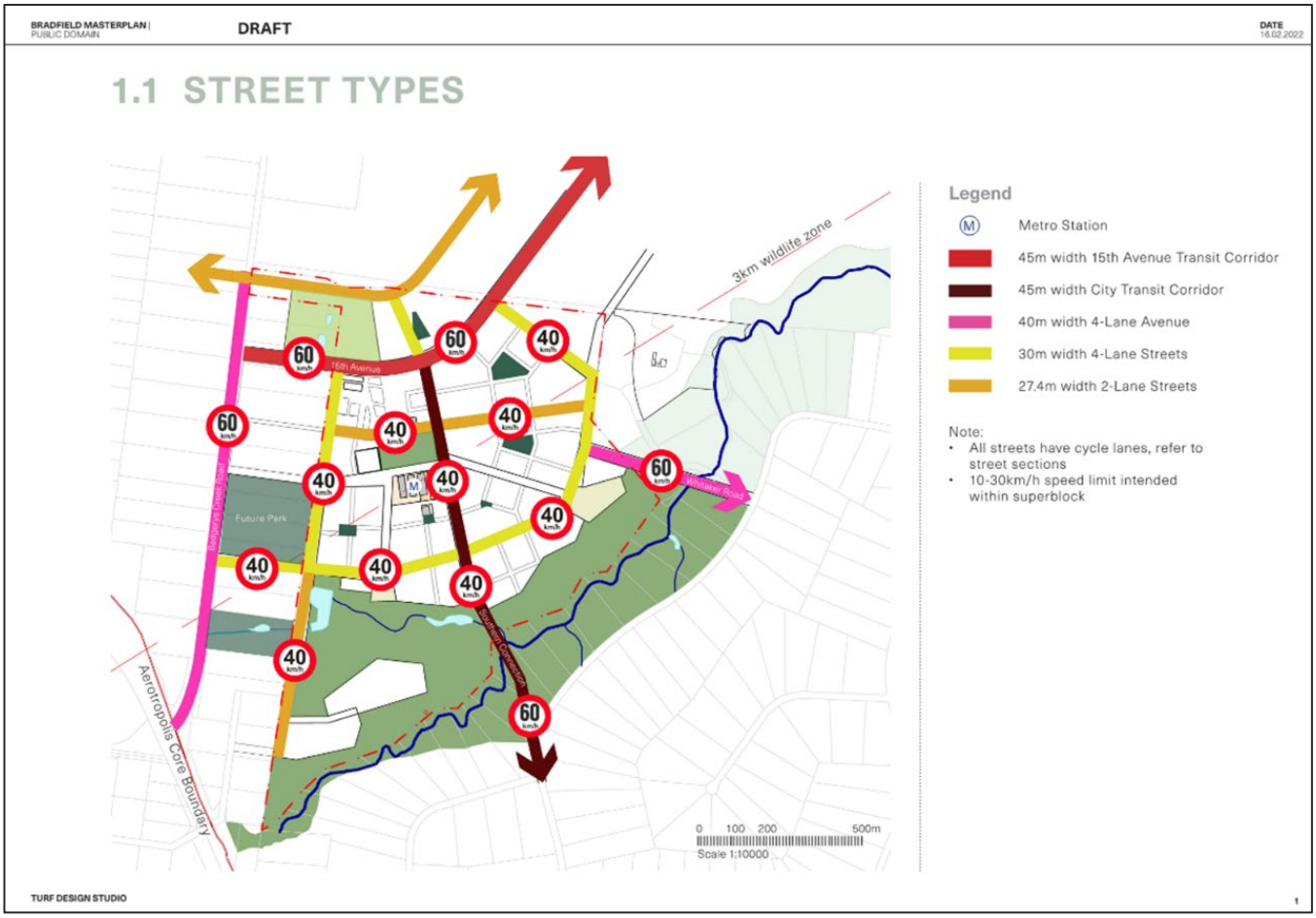


Table 5 – Road Geometry Design Criteria

Design Element	Masterplan Stage	Standards Adopted	Design Criteria Adopted	Comment
Horizontal Alignment				
Posted Speed	Long-term	Based on Figure 1.1 Street Types prepared by Turf Design Studio		
Design Speed	Long-term	AGRD03-16 Section 3.3	Operating speed 10 km/h higher than posted speed limit	
Horizontal Curve	Long-term	Liverpool City Council Design Spec Table D1.2(a)	40 km/h Desired Speed: 40 m 60 km/h Desired Speed: 80 m	Minimum horizontal curve of 40 m is provided.
Minimum Lane / Median Width	Long-term	Western Sydney Street Design Guidelines Table B.3	High Street / Innovation East and West, Innovation North, Whitaker - Travel lane width = 3.2m – 3.5m - Parking lane width = 2.0m – 2.4m Industrial Street / Centre Loop South - Travel lane width = 3.5m - Parking lane width = 2.0m – 2.4m Retail Laneway / Shared Street / Pedestrian Street - Travel lane width = 3.2m – 3.5m - Parking lane width = 2.0m – 2.4m	
Design Vehicle	Long-term	Western Sydney Street Design Guidelines Table B.3	High Street / Innovation East and West, Innovation North, Whitaker Rear-loaded: B85 Car Front-loaded: 8.8m Service Vehicle Industrial Street / Centre Loop South 19m Prime Mover and Semi Trailer Retail Laneway / Shared Street / Pedestrian Street 8.8m Service Vehicle	Future works: kerb return radii to be refined to suit design and check vehicles
Check Vehicle	Long-term	Western Sydney Street Design Guidelines Table B.3	High Street / Innovation East and West, Innovation North, Whitaker 12.5m Single unit truck/bus Industrial Street / Centre Loop South 25m B-Double Retail Laneway / Shared Street / Pedestrian Street 11m Garbage Truck	Future works: kerb return radii to be refined to suit design and check vehicles
Vertical Alignment				
Longitudinal Grade	Long-term	Western Sydney Planning Partnership Engineering	A general minimum gradient of 1.0 per cent should be adopted.	Minimum and maximum longitudinal

Design Element	Masterplan Stage	Standards Adopted	Design Criteria Adopted	Comment
		Design Manual (WSEDM) Section 4.3.1 (table 7)	Absolute minimum of 0.5% can be accepted for short distances (up-to 50m) Local Desirable maximum = 6.5% Absolute maximum = 16% Collector Desirable maximum = 6.5% Absolute maximum = 16%	slopes of 1% and 5% respectively are provided
Vertical Curve	Long-term	Liverpool City Council Design Spec Table D1.3	Local Minimum VC = 25 m Absolute minimum VC to be applied at road junctions only = 6 m Collector Minimum VC = 35 m Absolute minimum VC to be applied at road junctions only = 12 m	Minimum vertical curve of 200 m is provided.
Cross Fall	Long-term	WSEDM Section 4.3.1	Minimum at intersections = 1% Maximum at intersection = 5% Carriageway crossfall to WSUD or kerb line = 3%	3% cross fall provided
Batters	Long-term	Liverpool City Council Design Spec D1.16	Desirable minimum 3:1 Absolute minimum Cut 2:1 Fill 3:1 Rock batters ¼:1	Batters between 4:1 and 6:1 provided
Miscellaneous				
Property Splays	Long-term	WSEDM Section 4.3.1	Laneway Splay = 3m x 3m Street Splay = 4m x 4m Industrial Street Splay = 12m x 12m	Future Works: Boundary lines as per Roberts Day (splays not adopted)
Approach Sight Distance (ASD)	Long-term	WSEDM Section 4.3.1	Design Speed = 50 km/h Reaction Time = 2 sec	Future Works: Sight distance checks to be undertaken upon further refinement of intersections design and locations of driveways and pedestrian crossings
Safe Intersection Sight Distance (SISD)	Long-term	WSEDM Section 4.3.1	Design Speed = 50 km/h Reaction Time = 2 sec	

6.1.2 Opportunities and Constraints

The Master Plan extents form the boundary of the site (and the limit of works). While reviews have been undertaken to extend or connect into surrounding road networks – we acknowledge this coordination should be ongoing as design for surrounding infrastructure further develops.

The Moore Gully and Thompsons Creek flood levels as well as the Sydney Metro Aerotropolis Station plaza levels have dictated the level of the roads. These will ultimately be adjusted as the flood modelling is more refined and the public realm around the station develops.

6.2 Earthworks Strategy

AECOM has separated the earthworks volumes to be consistent with the staging plan included in the Master Plan Report. The breakdown of bulk earthworks quantities has been provided in **Table 6** below. Existing contours have been followed where possible to minimise the cut and fill required. The preliminary design indicates that the Bradfield City Centre development is in net import. As part of design refinement and the detailed design of the infrastructure, a detailed earthworks strategy should be prepared to optimise the movement of material to limit 'double handling' of spoil and avoid import of fill in favour of using onsite fill.

Table 6 presents a difference between proposed design and existing surfaces only. The following has been excluded from the calculated earthworks volumes. As the design progresses, inclusion of these elements will result in a reduction in overall import requirements and will bring the overall earthworks more into balance.

- Bulking
- Trenching
- Detailed grading of superlots
- Basement excavation
- Different earthworks streams (e.g. topsoil or contamination if found)
- Interface treatments (e.g. batters)

The detailed grading for Stage 4 will be heavily dependent on a post-development flood study and has not been developed at this point in time. The design for Ridgeline Park generally needs to maintain existing levels for vegetation retention. As such any earthworks are negligible in this area.

Box-out has been allowed as a nominal 500mm depth pavement and OSD Basin volumes are storage volumes only. It is anticipated that with considered grading of the superlots the precinct could get much closer to balanced.

General site grading has been conducted in favour of containing surface runoff to on-site infrastructure and basins, avoiding negative impacts to adjacent land.

Table 6 – Earthworks Cut / Fill Volume Breakdown

Stage	Cut	Fill	Balance	Import/Export
1	113,154	68,969	44,185	Export
2a	13,572	13,761	-189	Import
2b	11,496	6,415	5,081	Export
2c	0	20,682	-20,682	Import
3	3,388	392,659	-389,271	Import
Allowance for box-out stages 1-3*	98954	0	98,954	Export
Stage 4 to be developed in coordination with detailed flood assessment				
TOTAL	240,564	502,486	-261,922	**IMPORT**

** allowance only assuming 500mm depth excavation across road reserve for stages 1-3. Final volume to be confirmed during detailed design*

6.3 Soil Quality

6.3.1 Contamination

The *Detailed Site Investigation Report* (ERM, 2022) notes that no potential Asbestos Containing Materials (ACM) was identified within the majority of fill materials with the exception of those located in the area around the former married quarters. It is recommended that the Unexpected Finds Protocol from the Detailed Site Investigation Report and approved through the Site Audit Statement be included with all earthworks contracts to ensure its implementation in the event that ACM is encountered.

6.3.2 Salinity

High saline soils can have a very destructive effect on masonry and can impact the durability of concrete structures. The *Detailed Site Investigation Report* (ERM, 2022) identifies that the Bringelly Shale is brackish / saline through the field parameters collected during ground water sampling works.

The *Dryland Salinity Map* (ERM, 2022), refer to **Appendix 2**, shows that the majority of the site is of moderate salinity potential with areas near the Moore Gully increasing to high salinity potential. The site is also defined as high hazard or risk for all years.

It is recommended that the site-specific soil salinity extents be quantified and development site specific Salinity Management Plans be prepared prior to construction commencement of each section of the Bradfield City Centre.

6.3.3 Acid Sulphate

According to the Atlas of Australian Acid Sulfate Soils (ASS), the Bradfield City Centre and within the search buffer have an extremely low probability of occurrence. There is a 1-5% chance of occurrence, with any occurrences likely to be in small, localised areas.

6.4 Ecology Preservation

The earthworks design has generally followed the existing contours as far as reasonably practicable to minimise the cut and fill required. This also include areas zoned as ENZ Environment and Recreation where impacts to native vegetation have been minimised in order to reduce impacts on the biodiversity. The following areas have been retained based on the Ecological Community Mapping By Biosis:

- Ridgeline Park – Existing levels have been maintained for vegetation retention. As such any earthworks are negligible in this area
- Thompsons Creek – considered to be a key fish habitat and is likely to have a key fish habitat buffer of 50m. Liaison with DPI Fisheries and NSW Department of Natural Resources Access Regulator (NRAR) is required if works are to be undertaken within the inner 50% of the 40m riparian buffer on both sides of the watercourse.

6.5 Transport SEPP

Table 7 – Transport and Infrastructure SEPP Clause 4.9 Requirements

Reference	Master Plan Requirement	Response
Clause 4.9	Excavation in, above, below or adjacent to future infrastructure corridors	**Title**
(1)	This section applies to development that involves the penetration of ground to a depth of at least 2 metres below ground level (existing) on land (a) within, below or above a future infrastructure corridor, or (b) within 25 metres (measured horizontally) of a future infrastructure corridor, or (c) within 25 metres (measured horizontally) of the ground directly below a future infrastructure corridor, or (d) within 25 metres (measured horizontally) of the ground directly above an underground future infrastructure corridor.	Earthworks within 25m of the future infrastructure corridor are shown in **Appendix 1**
(2)	Before determining a development application (or an application for modification of a consent) for development to which this section applies, the consent authority must— (a) within 7 days after the application is made, give written notice of the application to Transport for NSW, and (b) take into consideration— (i) any response to the notice that is received within 21 days after the notice is given, and (ii) any guidelines issued by the Planning Secretary for the purposes of this section and published in the Gazette.	This application relates to approval of a Master Plan. Future DAs should be referred to TfNSW as defined
(3)	The consent authority must not grant consent to development to which this section applies without the concurrence of Transport for NSW.	Noted – to be established during DA approval
(4)	In deciding whether to provide concurrence, Transport for NSW must take into account— (a) the potential effects of the development (whether alone or cumulatively with other development or proposed development) on— (i) the safety or structural integrity of existing or proposed infrastructure in the future infrastructure corridor, and (ii) the safe and effective operation of existing or proposed future infrastructure in the future infrastructure corridor, and (b) what measures are proposed, or could reasonably be taken, to avoid or minimise those potential effects.	The earthworks in this report typically align with existing topography and levels set by Sydney Metro. The earthworks are not considered to negatively impact safety and integrity of the infrastructure corridor. Impacts of individual developments within or adjacent to the future infrastructure corridor will be referred and assessed as part of future works approvals.
(5)	Despite subsection (3), the consent authority may grant consent to development to which this section applies without the concurrence of Transport for NSW if 21 days have passed since	To be reviewed with subsequent DA approvals

Reference	Master Plan Requirement	Response
	the consent authority gave notice under subsection (2)(a) and Transport for NSW has not granted or refused to grant concurrence.	

7 Impacts and Mitigation Assessment

Below summarises the recommendations for future actions to further develop the integrated water approach and optimise the strategy proposed in this report.

Table 8 – Recommendations

Ref	Recommendation	Timeframe	Responsible
Road Design			
1	Detailed review against post-development flood constraints	As part of DA submission	WPCA
2	Bus stops, driveways and street furniture location and coordination	As part of DA submission	WPCA
3	Preparation of Salinity Management Plan	As part of DA submission	WPCA
4	Coordination on design of major roads (such as Metro Link Road) and all traffic signals with TfNSW	As part of DA submission	WPCA
5	Preparation of Erosion and Sediment Control plan that considers staging as well as long and short term impacts (such as sediment basins, dust suppression and coordination with other earthworks)	As part of DA submission	WPCA

8 Conclusion

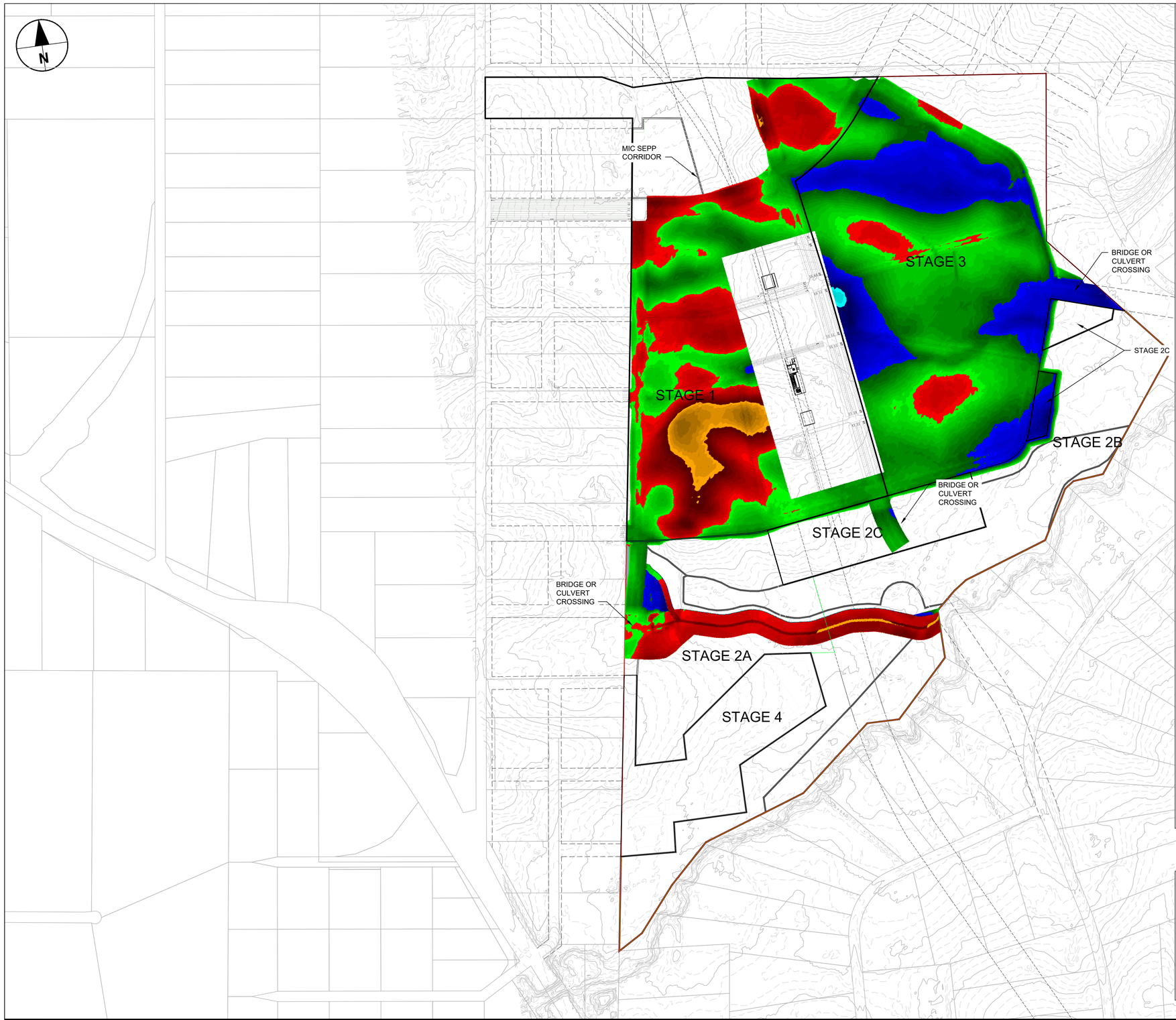
The works completed on this project provide a high-level assessment of the requirements of the masterplan grading of the Bradfield City Centre. This work has focused on vertical and horizontal geometry and earthworks staging. AECOM has prepared a 12D model to coordinate with existing and future environmental constraints.

The proposed earthworks design approach has based its design input on the new Sydney Metro station finished levels to provide consistency between designs.

The earthworks strategy aligns with Recognising Country principals while also providing an interface to the new Sydney Metro station.

Appendix 1 – Earthworks ISOPAC

ISO A1 594mm x 841mm



DEPTH: SURVEY TO DESIGN SURFACE

LOWER VALUE		UPPER VALUE		COLOUR
-30.0	to	-5.8	m	
-5.8	to	-5.6	m	
-5.6	to	-5.4	m	
-5.4	to	-5.2	m	
-5.2	to	-5.0	m	
-5.0	to	-4.8	m	
-4.8	to	-4.6	m	
-4.6	to	-4.4	m	
-4.4	to	-4.2	m	
-4.2	to	-4.0	m	
-4.0	to	-3.8	m	
-3.8	to	-3.6	m	
-3.6	to	-3.4	m	
-3.4	to	-3.2	m	
-3.2	to	-3.0	m	
-3.0	to	-2.8	m	
-2.8	to	-2.6	m	
-2.6	to	-2.4	m	
-2.4	to	-2.2	m	
-2.2	to	-2.0	m	
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-1.8	to	-1.6	m	
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-1.0	to	-0.8	m	
-0.8	to	-0.6	m	
-0.6	to	-0.4	m	
-0.4	to	-0.2	m	
-0.2	to	0.0	m	

LOWER VALUE		UPPER VALUE		COLOUR
0.0	to	0.2	m	
0.2	to	0.4	m	
0.4	to	0.6	m	
0.6	to	0.8	m	
0.8	to	1.0	m	
1.0	to	1.2	m	
1.2	to	1.4	m	
1.4	to	1.6	m	
1.6	to	1.8	m	
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4.2	to	4.4	m	
4.4	to	4.6	m	
4.6	to	4.8	m	
4.8	to	5.0	m	
5.0	to	5.2	m	
5.2	to	5.4	m	
5.4	to	5.6	m	
5.6	to	5.8	m	
5.8	to	300	m	

NOTES

1. FOR GENERAL NOTES REFER TO DRAWING SERIES 1000-CI-0005.
2. THE THREE DIMENSIONAL TERRAIN MODELLING SOFTWARE, 12D HAS BEEN UTILISED IN THE PREPARATION OF THE ESTIMATED EARTHWORKS QUANTITIES FOR THIS LAYOUT.
3. THE ESTIMATED EARTHWORKS QUANTITIES ARE SOLID INSIDE BASED ON DESIGN LEVELS AND EXISTING LEVELS.
4. NO ALLOWANCE FOR THE REMOVAL OF EXISTING PAVEMENTS, STRUCTURES, TOP SOIL ETC HAS BEEN INCLUDED.
5. NO ALLOWANCE FOR BULKING OR SHRINKAGE OF SPOIL HAS BEEN INCLUDED.
6. NO ALLOWANCE FOR REMOVAL OF UNSUITABLE MATERIAL THAT HAS BEEN INCLUDED IN THIS ESTIMATE INCLUDING CONTAMINATED MATERIAL. THE ESTIMATED NET VOLUME ASSUMES ALL CUT MATERIAL IS SUITABLE FOR REUSE AS FILL ON THE SITE.
7. NO ALLOWANCE HAS BEEN MADE FOR TRENCHING OF SERVICES INCLUDING DRAINAGE INFRASTRUCTURE.

This drawing is confidential and shall only be used for the purpose of this project. The signing of this title block confirms the design and drafting of this project have been prepared and checked in accordance with the AECOM quality assurance system to ISO 9001-2000.

Last saved by: DANIELR1(2023-08-02) Last Plotted: 2023-08-02
Filename: C:\USERS\DANIELR1\ONEDRIVE - AECOM\DOCUMENTS\NEW FOLDER\60646285-SHT-00-0000-CI-0061.DWG

AECOM

CONSULTANT

AECOM Australia Pty Ltd
A.B.N 20 093 846 925
www.aecom.com

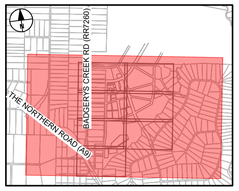
PROJECT

AEROTROPOLIS
CORE PRECINCT
BRINGELLY

CLIENT

NSW GOVERNMENT | Western Parkland City Authority

KEY PLAN



SCALE BAR

0 50 100 m
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SAFETY IN DESIGN INFORMATION

ARE THERE ANY ADDITIONAL HAZARDS / RISKS NOT NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING?
☐ NO
☐ YES

PROJECT MANAGEMENT INITIALS

JS	CR	GAR
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM		SURVEY	

ISSUE/REVISION

I/R	DATE	DESCRIPTION
02	29-06-2023	FOR INFORMATION
01	24-11-2022	FOR INFORMATION

PROJECT NUMBER

60646285

SHEET TITLE

BULK EARTHWORKS PLAN

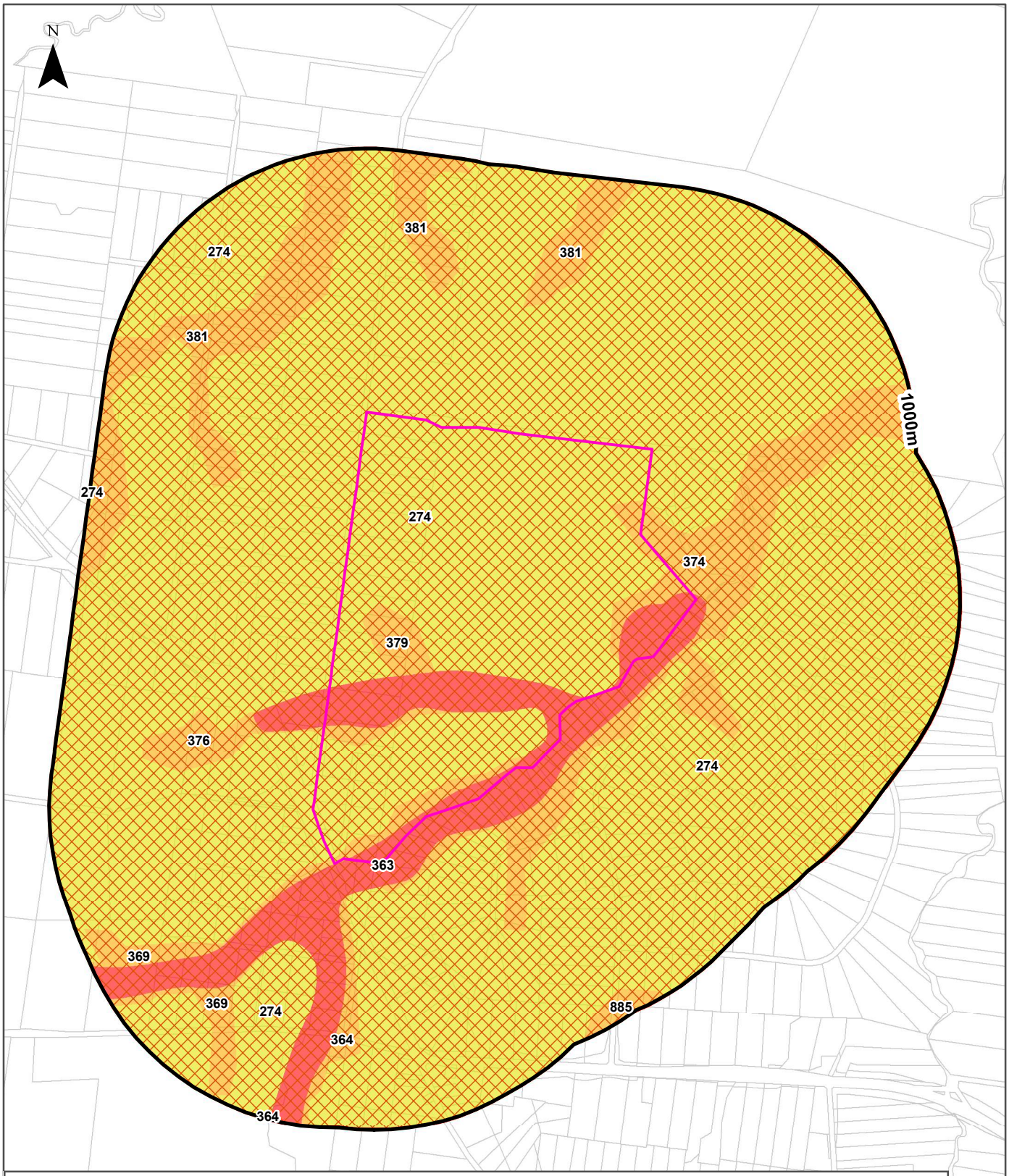
SHEET NUMBER

60646285-SHT-00-0000-CI-0061

Appendix 2 – Salinity Map

Dryland Salinity

Badgerys Creek Road, Bringelly, NSW 2556



Legend

- Site Boundary
- Report Buffer
- Property Boundary

Dryland Salinity - National Assessment

- Delineated risk area but no high hazard or risk rating for either 2000, 2020, 2050
- High hazard or risk in 2050 only
- High hazard or risk defined for 2050, but no assessment made for 2000 or 2020
- High hazard or risk in 2020 and 2050
- High hazard or risk in 2000 and 2050. 2020 not defined as high hazard
- High hazard or risk defined for all years: 2000, 2020, 2050

Salinity Potential of Western Sydney

- Area of Known Salinity
- Area of High Salinity Potential
- Area of Moderate Salinity Potential
- Area of Very Low Salinity Potential
- Area of Water

Scale: 0 100 200 400 600 800 1,000 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2020

Coordinate System: GDA 1994 MGA Zone 56

Date: 28 October 2020

Western Parkland City Authority

T: 1800 312 999
E: hello@wpca.sydney
W: wpca.sydney

NSW GOVERNMENT

APPENDIX H

20230913 Bushfire Strategy and Impact Assessment Report

Western Parkland City Authority

Bradfield City Centre
Master Plan Application

Bushfire Strategy and Impact Assessment Study

Prepared by Eco Logical Australia

September 2023

wpca.sydney

NSW GOVERNMENT

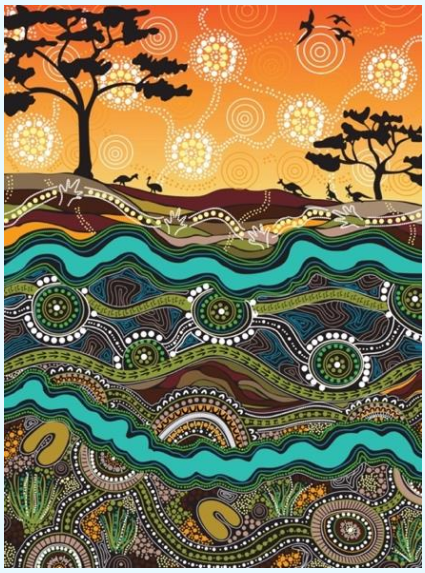
Acknowledgement of Country

Aboriginal people have had a continuous connection with the Country encompassed by the Western Parkland City (the Parkland City) from time immemorial. They have cared for Country and lived in deep alignment with this important landscape, sharing and practicing culture while using it as a space for movement and trade.

We Acknowledge that four groups have primary custodial care obligations for the area: Dharug/Darug, Dharawal/Tharawal, Gundungurra/Gundungara and Darkinjung. We also Acknowledge others who have passed through this Country for trade and care purposes: Coastal Sydney people, Wiradjuri and Yuin.

Western Sydney is home to the highest number of Aboriginal people in any region in Australia. Diverse, strong and connected Aboriginal communities have established their families in this area over generations, even if their connection to Country exists elsewhere. This offers an important opportunity for the future of the Parkland City.

Ensuring that Aboriginal communities, their culture and obligations for Country are considered and promoted will be vital for the future of the Parkland City. A unique opportunity exists to establish a platform for two-way knowledge sharing, to elevate Country and to learn from cultural practices that will create a truly unique and vibrant place for all.



Garungarung Murri Murri Nuru
(Beautiful Grass Country)
Artwork created by Dalmarri artists Jason Douglas and Trevor Eastwood for the Western Parkland City Authority

Version	Status	Date	Prepared By	Reviewer	Comments
1	Draft	18/2/2022	Kate Mannell / Deanne Hickey	Bruce Horkings FPAA BPAD Certified Practitioner No. BPAD229962-L3	Prepared by Eco Logical Australia
2	Draft	29/03/2022	Kate Mannell / Deanne Hickey	Nathan Kearnes FPAA BPAD Certified Practitioner No. BPAD23575-L3	Prepared by Eco Logical Australia
3	Draft	11/11/2022	Kate Mannell /Robyn Stevens /Deanne Hickey	Nathan Kearnes FPAA BPAD Certified Practitioner No. BPAD23575-L3	Prepared by Eco Logical Australia
4	Issue for TAP only	25/11/2022	Kate Mannell /Robyn Stevens /Deanne Hickey	Nathan Kearnes FPAA BPAD Certified Practitioner No. BPAD23575-L3	Prepared by Eco Logical Australia
5	Final	19/06/2023	Kate Mannell /Robyn Stevens /Deanne Hickey	Bruce Horkings FPAA BPAD Certified Practitioner No. BPAD229962-L3	Prepared by Eco Logical Australia
6	Final	27/06/2023	Kate Mannell /Robyn Stevens /Deanne Hickey	Bruce Horkings FPAA BPAD Certified Practitioner No. BPAD229962-L3	Prepared by Eco Logical Australia
7	Final	03/08/2023	Kate Mannell /Robyn Stevens /Deanne Hickey	Bruce Horkings FPAA BPAD Certified Practitioner No. BPAD229962-L3	Prepared by Eco Logical Australia
8	Final	13/09/2023		H. Gilvear (WPCA)	Amended Table 1

Executive Summary

This study evaluated the Master Plan Application for Bradfield City Centre, on behalf of Western City Parkland Authority (WPCA), against the bushfire strategic planning requirements of *Planning for Bushfire Protection* (PBP). In undertaking this assessment, a Strategic Bushfire Study was compiled to comply with the requirements set out in Chapter 4 (*Strategic Planning*) of PBP.

The technical assessment considered the broader bushfire landscape and risk profile for the study area, along with the feasibility for the provision of bushfire protection measures within the Master Plan, or where appropriate, the feasibility of relevant aspects for future planning stages. The study also reviewed the Master Plan Application against the relevant policies and requirements including Western Sydney Aerotropolis Development Control Plan – Phase 2 (DCP) and considered whether the proposal is consistent with the performance outcomes established for bushfire management in the DCP.

In consideration of the Master Plan with regard to the strategic planning principles of PBP, a landscape risk assessment was undertaken, which included an assessment of the broader bushfire landscape, bushfire weather and potential fire behaviour. A land use evaluation was also conducted to consider the appropriateness of future land uses and the ability for future development to comply with requirements set out in PBP.

The outcomes of this study indicate the residual risk influencing the site is not considered inappropriate for future development and therefore the land uses proposed by the Master Plan are not considered unsuitable with respect to the objectives of PBP, nor are they considered inconsistent with the DCP.

However, key recommendations as planning progresses includes delineation of the final hazard extent and typology particularly within the Thompsons Creek/ Moore Gully corridor and allowance for bushfire protection measures meeting the acceptable solutions of PBP, including provision for compliant perimeter roads adjacent to all bushfire hazards.

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Glossary of Terms

AS	Australian Standard
Aerotropolis	Western Sydney Aerotropolis
APZ	Asset Protection Zone
BAL	Bushfire Attack Level
BC Act	Biodiversity Conservation Act 2016
BFPL	Bush Fire Prone Land
BFRMP	Bush Fire Risk Management Plan
CBD	Central Business District
CDC	Complying Development Certificate
CIV	Capital Investment Value
DA	Development Application
DP	Deposited Plan
DPE	Department of Planning and Environment
DTS	Deemed to Satisfy
ENT	Enterprise Land Use Zone
ENV	Existing Native Vegetation
ENZ	Environment and Recreation Land use Zone
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
FDI	Fire Danger Index
FFDI	Forest Fire Danger Index
GEV	Generalised Extreme Value
LEP	Local Environmental Plan
LGA	Local Government Area

NASH	National Association of Steel-Framed Housing
NSP	Neighbourhood Safer Place
NSW Government	State Government for NSW
PBP	Planning for Bush Fire Protection
RFS	Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
WPCA	Western Parkland City Authority

1 Introduction

1.1 Purpose of this report

This report accompanies the Master Plan Application for the Bradfield City Centre submitted to the Department of Planning and Environment (DPE).

All matters were considered to have been adequately addressed within the Master Plan Application or in the accompanying appendices.

1.2 The Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,200-hectare region set to become Sydney's third city (the Western Parkland City), and the gateway and economic powerhouse of Western Sydney.

The Aerotropolis comprises of the new Western Sydney (Nancy-Bird Walton) International Airport surrounded by five initial precincts which include the Aerotropolis Core, Wianamatta– South Creek, Northern Gateway, Agri-business and Badgerys Creek outlined in **Figure 1** below.

The final Aerotropolis planning package, including the Precinct Plan and State Environmental Planning Policy (SEPP) Amendment, was gazetted by DPE in March 2022 and the Development Control Plan Phase 2 was finalised in November 2022. These documents have been used to inform the preparation of the Bradfield City Centre Master Plan.

The proposed Master Plan Application for the site has also been prepared using the Western Sydney Aerotropolis Master Plan Guideline and Master Plan Requirements.

2 Bradfield City Centre

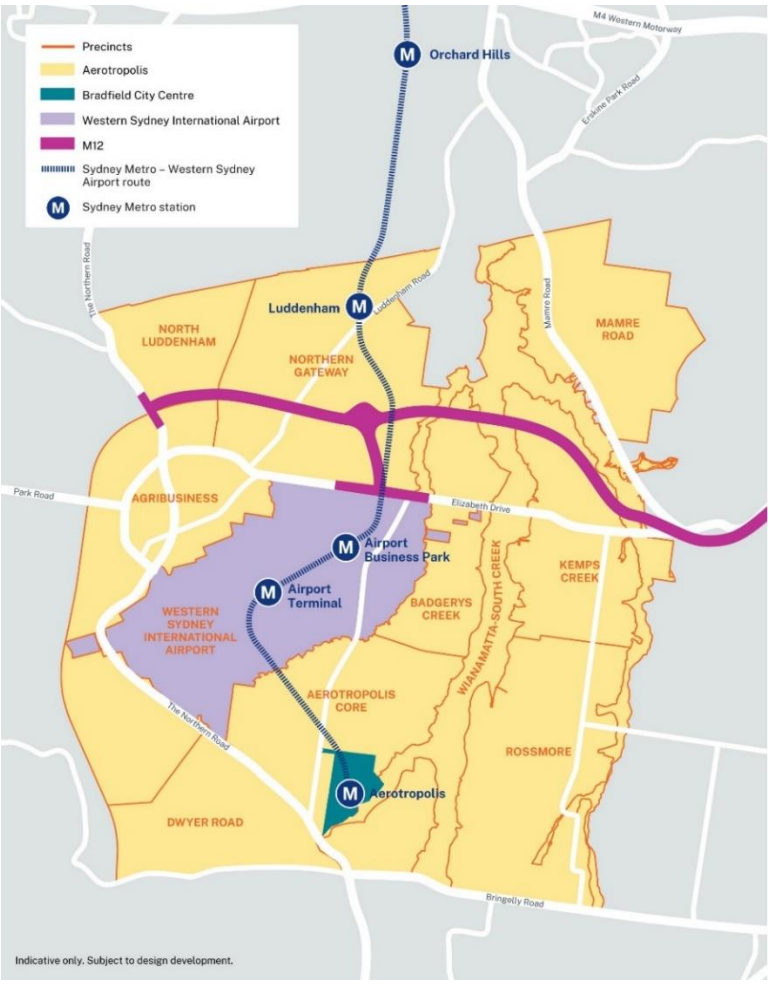
2.1 Strategic Context

The Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and The Northern Road (see **Figure 1** below).

The Sydney Metro Western Sydney Airport line runs through the site, providing connections from the key centre of St Marys through to stations at Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis which is located within the site.

The site is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and The Northern Road.

Figure 1 Strategic Context



Set on natural waterways, Bradfield City Centre presents a rare opportunity to showcase the best urban design and to create a thriving, blue and green, connected City in which Australians will want to live, learn and work. The Bradfield City Centre will be a beautiful and sustainable 22nd Century City. It will foster the innovation, industry and technology needed to sustain the broader Aerotropolis and fast track economic prosperity across the Western Parkland City.

2.2 The Master Plan Site

The street address for Bradfield City Centre is 215 Badgerys Creek Road, Bradfield (the Site) within the Liverpool Council Local Government Area (LGA). The site is legally described as Lot 3101 DP 1282964 and has an area of 114.6 hectares, with road access to Badgerys Creek Road located at the north-western corner. The site spans across the Aerotropolis Core and Wianamatta-South Creek Precinct, within Western Sydney Aerotropolis. The Site is outlined in **Figure 2** below.

The Site is predominantly zoned Mixed Use under the Western Parkland City SEPP, with a small portion of Enterprise zoned land located on the north-western corner of the site. The site also includes Environment and Recreation zoned land mostly along `s Creek.

Figure 2 Master Plan Site

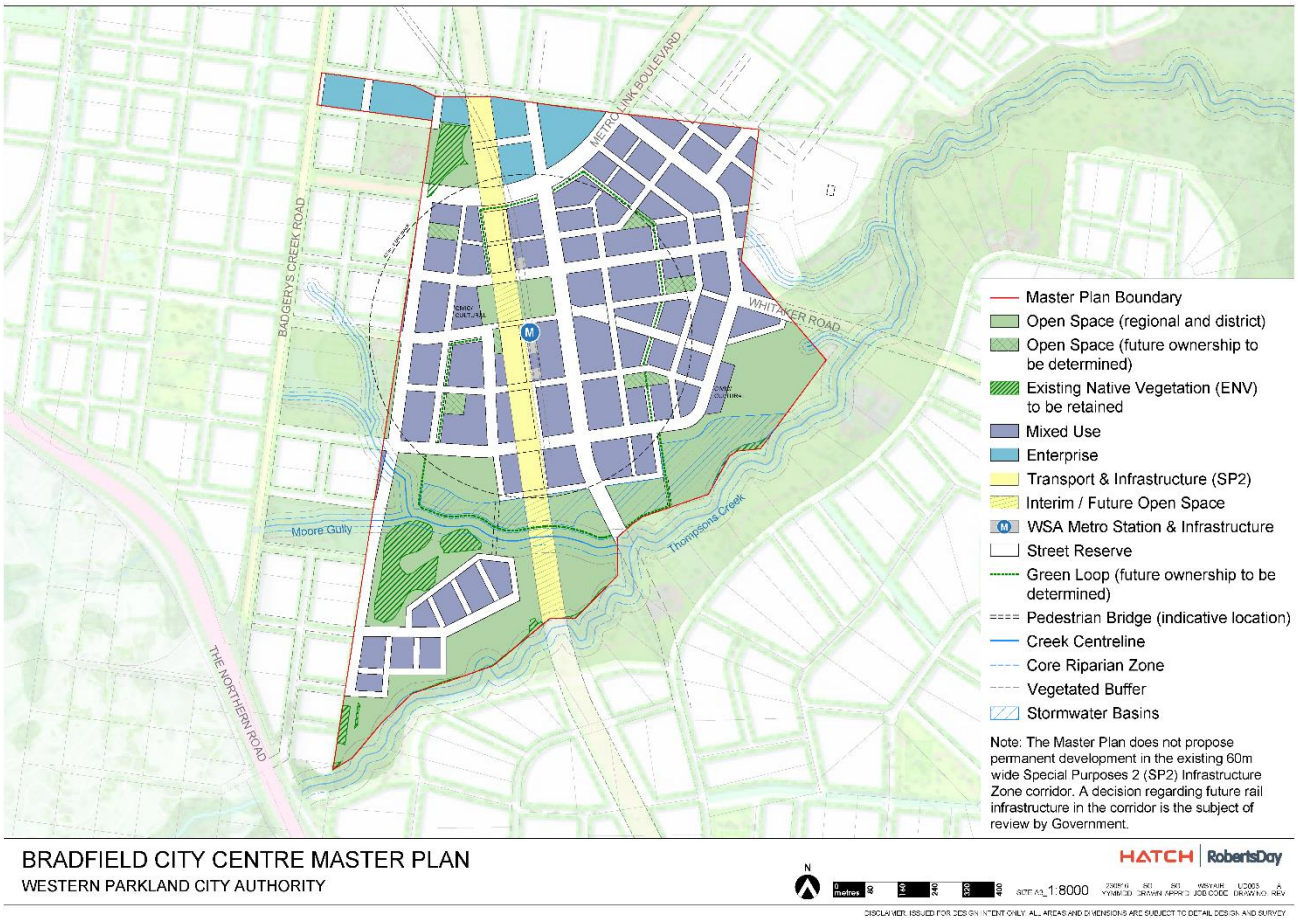
2.3 The Bradfield City Centre Master Plan

The Western Parkland City Authority has prepared a Master Plan (**Figure 3** below) in accordance with the DPE Master Plan Requirements.

The Master Plan sets out a framework for future development within the Bradfield City Centre which includes:

- Road network, key connectors to adjoining land and the regional road network (existing and future)
- Block structure
- Indicative open space network
- Sustainability strategy
- Social and infrastructure strategy
- Arts and culture strategy
- Infrastructure servicing strategy

Figure 3 Master Plan



2.4 The Proposal

The Bradfield City Centre Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons for technical assessments.

Table 1 - Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500 sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000 sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

3 Baseline investigations

The Subject Land is currently mapped as bushfire prone land on the Liverpool City Council Bush Fire Prone Land (BFPL) map as published by the Department of Planning and Environment (DPE). However, this is expected to change as the Aero Core Precinct and surrounding precincts (including the Western Sydney Airport north-west of the Site) are activated and developments lead to a change in extent of bushfire prone vegetation.

The Subject Land is primarily zoned Mixed Use (MU), with portions of Environment and Recreation (ENZ), and Enterprise (ENT) under the Western Parkland City SEPP. Historically, the Subject Land has been utilised for agriculture and the current landscape is dominated by vacant agricultural land. External to the site, along the western, eastern and south-eastern boundaries is existing rural residential development.

3.1 Technical baseline site consideration

This study seeks to review the Master Plan application in relation to the requirements of *Planning for Bush Fire Protection* (PBP) (RFS 2019). In meeting this objective, the study will consider the bushfire landscape risk, land uses, access and egress, emergency services, infrastructure and adjoining land.

3.2 Area of Focus

This study considers the land for which the Master Plan Application for the Bradfield City Centre applies (Subject Land), (**Figure 4**)

Figure 4 Study Area for Strategic Bushfire Assessment

4 Assessment Requirements and Policy Context

4.1 Master Plan Requirements

The DPE have issued Master Plan Requirements (MPRs) to the Authority for the preparation of a Master Plan for Bradfield City Centre. This report has been prepared to address the following MPRs in relation to bushfire as summarised in Table 2.

Table 2 - Master Plan Requirements

Reference	Master Plan Requirement	Where addressed
23. Bushfire	The draft master plan must consider bush fire prone land and detail proposed bush fire protection measures, demonstrating compliance with Planning for Bush Fire Protection, and any requirements of the *Rural Fires Act 1997*.	Sections 4 and 5 outline assessment requirements and technical approach. Master Plan technical investigation is detailed in Section 6 and Impacts and mitigation assessment detailed in Section 7.
9. Complying Development Controls	The master plan must contain development controls applying to complying development, in accordance with clause 43 of the Aerotropolis SEPP, if complying development is proposed.	Section 0 discusses CDC constraints regarding bushfire

4.2 State Government Plans/Policies

4.2.1 NSW Environmental Planning and Assessment Act (1979)

The NSW Environmental Planning and Assessment Act (EP&A Act) is the principal planning legislation for the state, providing a framework for the overall environmental planning and assessment of development proposals. Various legislation and instruments are integrated with the EP&A Act, including the NSW Rural Fires Act 1997 (RF Act). Section 10.3 of the EP&A Act requires the identification of BFPL and development of BFPL maps, which act as a trigger for bushfire assessment provisions for strategic planning and development. When investigating the capability of BFPL in relation to a proposal, consent authorities must have regard to

Section 9.1 (2) Direction 4.3 – 'Planning for Bushfire Protection' of the EP&A Act.

The objectives of Direction 4.3 are to:

- Protect life, property and the environment from bushfire hazards, by discouraging the establishment of incompatible land uses in bushfire prone areas; and
- Encourage sound management of bushfire prone areas.

Direction 4.3 instructs the consent authority on the bushfire matters which need to be addressed and includes:

- Consultation with the Commissioner of the NSW RFS and consideration to any comments made;
- Regard to requirements of Planning for Bushfire Protection; and
- Compliance with numerous bushfire protection provisions where development is proposed.

Further, there are various provisions within the EP&A Act that may be applicable to proposals on BFPL, as outlined below:

- Section 3.29 of the EP&A Act relates to the development of State Environmental Planning Policies (SEPPs) and within these policies, additional bushfire considerations may apply.
- Section 4.46 relates to integrated development and triggers Section 100B of the RF Act and Clause 44 of the *Rural Fires Regulation 2013* (RF Reg):
  - Applicable to subdivision, with specific requirements in Chapter 5 of PBP;
  - Applicable to SFPP developments, with specific requirements in Chapter 6 of PBP; and
  - Requires a bushfire safety authority under Section 100b of the RF Act.
- Section 3.1 relates to strategic or local planning.
  - Applicable to land use planning that covers large areas and may include a variety of land uses and longer-term development objectives. Specific bushfire requirements are outlined in chapter 4 of PBP.

4.2.2 Rural Fires Act 1997 (RF Act)

The *RF Act* is integrated into the *EP&A Act* and triggered by Section 4.46 as outlined above. The key objectives of the RF Act are to provide for the:

- Prevention, mitigation and suppression of bush and other fires;
- Co-ordination of bushfire fighting and bush fire prevention;
- Protection of persons from injury or death, and property from damage, arising from fires;
- Protection of infrastructure and environmental, economic, cultural, agricultural and community assets from damage arising from fires; and
- Protection of the environment by requiring certain activities to be carried out having regard to the principles of ecologically sustainable development.

4.3 Western Sydney Aerotropolis

The Master Plan will facilitate development in the Western Sydney Aerotropolis in accordance with the objectives and principles of the Western Sydney Aerotropolis Plan, with consideration to:

- Relevant legislation (e.g., EP&A Act)
- Western Parkland City SEPP (including proposed amendments)
- Other relevant SEPPs including:
  - Seniors Housing SEPP (Housing for Seniors or People with a Disability. Clause 27 of the SEPP requires PBP compliance and RFS consultation for development on BFPL.
  - Infrastructure SEPP. Clause 16 of the SEPP requires RFS consultation for residential or Special Fire Protection Purpose (SFPP) development on BFPL.
- Relevant Technical Reports including:
  - Urban Design Report (Hatch Roberts Day, June 2023)
  - Vegetation mapping undertaken for the Precinct (Biosis, June 2023)
  - Bushfire studies undertaken for the Western Sydney Aerotropolis (ELA 2020a) and Aero Core Precinct (ELA 2020b) on behalf of the Western Sydney Planning Partnership
- Western Sydney Aerotropolis Development Control Plan Phase 2 (NSW DPE, November 2022).
- Western Sydney Aerotropolis Master Plan Guidelines and Supplementary Guidance document (NSW DPIE, December 2021).

The Aerotropolis Development Control Plan Phase 2 (DCP) contains two key performance outcomes relevant to bushfire. Table 3 outlines the sections of this study where aspects of the benchmark solutions have been considered, along with relevant comment.

Table 3 - Policy Requirements

Numeric Section	Performance outcome	Benchmark solution	Master Plan consideration and comment
PO2	Populations of threatened species are retained, and the condition of suitable habitat improves within areas of the Cumberland subregion most likely to support long-term viability.	7: Locate Asset Protection Zones (APZs) for bushfire protection wholly within certified land. The appropriate APZ distance is determined by Planning for Bush Fire protection 2019 and Rural Fire Service Standards for Asset Protection based on vegetation type, slope and development type.	Indicative APZ's are achievable within the developable area or within planned managed open space areas. The final location and dimension of APZs is to be confirmed once the hazard extent is finalised, pending detailed design of riparian corridors and vegetation retention and management plans.
PO6	Bushfire risk is minimised	1: Ensure appropriate fire management regimes and hazard reduction techniques for native	The masterplan is consistent with the performance outcome through adherence to

Numeric Section	Performance outcome	Benchmark solution	Master Plan consideration and comment
		vegetation areas, waterways, and riparian zones.	requirements of PBP. The masterplan does not impede appropriate fire management regimes in line with the benchmark solution

4.4 Other Relevant Technical Standards

4.4.1 Planning for Bush Fire Protection

Chapter 4 of PBP outlines the broad principles and assessment considerations required for strategic planning. The strategic planning principles are summarised as:

- *Ensuring land is suitable for future development in the context of bush fire risk;*
- *Ensuring new development on Bush Fire Prone Land (BFPL) will comply with PBP;*
- *Minimising reliance on performance-based solutions;*
- *Providing adequate infrastructure associated with emergency evacuation and firefighting operations; and*
- *Facilitating appropriate land management practices.*

PBP also prescribes the exclusion of inappropriate development during strategic planning, based on:

- *The development area is exposed to a high bush fire risk and should be avoided;*
- *The development is likely to be difficult to evacuate during a bush fire due to its siting in the landscape, access limitations, fire history and/or size and scale;*
- *The development will adversely affect other bush fire protection strategies or place existing development at increased risk;*
- *The development is within an area of high bush fire risk where density of existing development may cause evacuation issues for both existing and new occupants; and*
- *The development has environmental constraints to the area which cannot be overcome.*

To assist in evaluating the appropriateness of future development of an area, with regard to the assessment principles outlined above, PBP documents a set of assessment considerations, identified in Table 4.2.1 of PBP and summarised in Table 4 below. As per the strategic planning requirements outlined in Chapter 4 of PBP, assessment of these aspects is necessary for strategic planning at state, regional and local government levels, including LEP or DCP amendment, regional planning, precinct planning and master planning. This ensures, that at the development assessment phase, future development on land that is identified as being BFPL can comply with PBP.

Future development will also need to consider the 2022 Addendum to PBP (RFS, 2022), which prescribes

additional bushfire protection measures for specific Class 9 SFPP buildings (including schools, aged care, hospitals) located on BFPL. This aligns with National Construction Code 2022 (NCC; ABCB 2022) provisions (Part G5 and Specification 43) enacted 1 May 2023.

4.5 Summary of Key Implications for Master Plan

Following review of relevant legislative requirements, applicable planning controls and guidelines, Section 6 considers the technical framework to be implemented to meet the strategic planning principles of PBP, whilst Section 7 presents the technical assessment addressing the specific requirements for a Strategic Bushfire Study as required by PBP.

Also considered in subsequent sections, is the temporal scale at which the Master Plan will be implemented, with Stage 1 commencing 2023, through to the longer-term activation to 2056 and beyond.

Table 4 - Summary of assessment considerations for a strategic bush fire study (adapted from Table 4.2.1 of PBP)

Issue	Summary of Assessment Considerations
Bush fire landscape assessment	A bushfire landscape assessment considers the likelihood of a bush fire, its potential severity and intensity and the potential impact on life and property in the context of the broader surrounding landscape.
Land use assessment	The land use assessment will identify the most appropriate locations within the masterplan area or site layout for the proposed uses.
Access and egress	A study of the existing and proposed road networks both within and external to the masterplan area and site layout.
Emergency services	An assessment of the future impact of the new development on emergency services provision.
Infrastructure	An assessment of the issues associated with infrastructure provision.
Adjoining land	The impact of new development on adjoining landowners and their ability to undertake bush fire management.

4.6 Future Development Assessment Pathway

Some types of future development on BFPL may be undertaken as either Exempt or Complying Development under the Codes SEPP. Complying development can generally be undertaken on lower risk BFPL up to and including Bushfire Attack Level (BAL)-29 where the appropriate construction requirements and all other relevant development standards have been met. For higher risk BFPL settings, certain land uses, or where complying development cannot be achieved, the Development Application process would apply, with approval from the consent authority required.

The Western Sydney Aerotropolis Master Plan Guidelines states that complying development controls should consider the following matters:

- *Development types (uses), locations, staging (if any), building class to be carried out as complying development;*

- *Locations not suitable for complying development which may be due to prohibitions, planning constraints or exclusions in the Aerotropolis SEPP; and*
- *Key development controls and parameters for each complying development type/building/zone, which may include (but not limited to), three dimensional design controls for building height, floor space ratio, site coverage, any key building design principles (setbacks, articulation, separation, general design language, street activation), deep soil zones, landscaping and planting, traffic and parking strategy, stormwater, and servicing strategy and/or capability.*

Reviewing these considerations in relation to bushfire, Table 5 highlights key aspects to be evaluated for future development in regard to the suitability of the Complying Development Certificate (CDC) pathway.

Table 5 - CDC considerations for bushfire compliance

CDC Consideration	Restrictions to CDC pathway
Future Development Types	Subdivision, SFPP development, multi-storey development, Class 9 buildings to which section 8.3.11 of PBP (Public Assembly Buildings) is applicable, or any other development type that requires approval by the consent authority and /or referral to the RFS.
Locations	Prohibited CDC locations due to planning exclusions, or where the situation of future development is subject to BAL-40 or BAL-FZ
Staging	Staging of future development that inhibits feasibility (even if temporary) to comply with acceptable solution of PBP or achieve BAL-29 or lower.
Development controls	Design controls/capabilities (e.g. setbacks, landscaping and planting, traffic and parking strategy, servicing strategy) are inconsistent with acceptable solutions of PBP.
Planning Constraints	Eligible future development does not comply with all required acceptable solutions of PBP; or development to which the Codes SEPP does not apply

As development is activated, it is recommended that Bush Fire Prone Land mapping is updated in accordance with the RFS guideline, current at the time of development. All future development on BFPL will need to meet the requirements of Planning for Bush Fire Protection, and a BAL certificate can be issued by a suitably qualified consultant (e.g. BPAD accredited assessor) recognised by the NSW RFS may be required.

5 Technical Approach/ Framework

5.1 Master Plan Considerations

The Master Plan is the first step in the planning process to facilitate differing land use activities and future development across the site, as shown in **Figure 3**. It presents a plan that enables a variety of topologies facilitating a mixture of-residential uses, commercial and enterprise development, infrastructure, open space, public recreation, and conservation.

Future land uses considered by the Master Plan would be subject to various aspects of PBP, when occurring on BFPL. **Table 6** below outlines key PBP considerations for a variety of land uses and associated facilities that future development may be subject to.

Table 6 - PBP Considerations for future land uses

Future Land Use	Associated Facilities and/or Activities	Key PBP Considerations for future development
Residential Land Use		
Medium density & multi-storey residential	Walk-up apartments, mid-rise apartment, mixed use residential and retail	Chapter 5 of PBP outlines the bushfire protection requirements for residential subdivision, including performance criteria identified for APZs, access and infrastructure. There are also additional considerations outlined in Section 8.2.2 of PBP (Multi-storey residential development) for residential buildings exceeding three storeys.
Special Fire Protection Purpose	Independent Living and Aged Care Childcare facilities, Hospitals Education facilities	Chapter 6 of PBP outlines the bushfire protection requirements for this type of development, including performance criteria identified for APZs, access and infrastructure.
Non-Residential Land Use		
Commercial	Retail and specialised retail including food services	Section 8.3.10 of PBP (Commercial and Industrial Development) applies to this type of development. Relevant protection measures to meet the aim and objectives of PBP.

Future Land Use	Associated Facilities and/or Activities	Key PBP Considerations for future development
Industrial	High tech industrial and enterprise development	Section 8.3.10 of PBP (Commercial and Industrial Development) applies to this type of development. Relevant protection measures to meet the aim and objectives of PBP.
Public Assembly Buildings	Buildings used for public assembly with a floor space area of greater than 500m^2	Section 8.3.11 (Public Assembly Buildings) applies to this type of development. Relevant developments will be treated as SFPP

In investigating the suitability of future development within an area of interest, a complex and large array of bushfire-related issues and concepts will be explored. Foremost however, this investigation is underpinned by the prioritisation of first principal bushfire risk considerations. As such, the bushfire assessment framework outlined below will guide this assessment.

5.1.1 Residual risk

All BFPL poses a bushfire risk. Complete removal of bushfire risk is not appropriate or possible in many instances, nor is it a policy setting under PBP. Determining whether the level of residual risk (i.e., the level of risk after application of bushfire protection measures) is a key factor in the strategic assessment of whether a development or proposed land use is appropriate.

Provided the risk exposure is appropriately reduced, development can occur with an appropriate level of safety on BFPL. PBP outlines the measures to achieve bushfire risk reduction generally and establishes the NSW policy setting for appropriate bushfire protection. Experience and research have successfully demonstrated appropriate bushfire protection is feasible within a very wide range of bushfire risk situations. Nevertheless, development on BFPL always has a residual bushfire risk e.g., from burning debris or for offsite evacuation, regardless of the initial risk level and risk treatments. This strategic bushfire study acknowledges that the outcome of any potential development on BFPL resulting from the proposal includes a level of residual risk and considers the acceptability of that risk.

5.1.2 Risk to life versus risk to property

A lower residual risk is required for the protection of life than that required for the protection of built assets, due to the vulnerability of people exposed to bushfire attack and the pre-eminent value assigned to human life. Assessment of the residual risk has therefore considered life and property risks separately, in the first instance.

5.1.3 Life protection and evacuation

An appropriately low residual risk to human life is fundamentally important in bushfire protection. Whilst offsite evacuation potentially offers a safer destination, the risks associated with undertaking offsite evacuation (e.g., travel during an emergency) can pose additional risks. Also, the logistical challenges of offsite evacuation can be high and should not become an unacceptable burden on emergency services, and in a strategic planning context, should not adversely impact the demands of the existing emergency service evacuation management.

Early offsite evacuation is the nationally accepted safest means for protection of life and for offsite

evacuation to be effective, it should not require the assistance of emergency services. Notwithstanding this, early unassisted offsite evacuation is a key risk assessment benchmark in this study; experience and research has demonstrated that it is not fail-safe or always feasible. Research and post incident inquiries have also found that providing evacuees options (along with warnings and information) is important to their survival.

While options such as 'within precinct' evacuation and onsite refuge are not fail-safe, enabling these options, increases the resilience the city, and should be considered as planning progresses. This would assist in lowering the residual risk to an appropriate level, with a well-designed combination of onsite and offsite evacuation achieving the lowest residual risk, even if the onsite options are considered a 'redundancy' in terms of bushfire risk planning.

5.1.4 Emergency service response

The acceptability of proposed development should not be reliant on emergency service response / intervention. However, an emergency service response is a legitimate risk lowering consideration, that can be viewed as a bushfire protection 'redundancy' in a strategic planning context. However, it is noted within this report that planned activation of additional services should be scheduled with the relevant agencies to ensure service capacity is appropriate to the level of uplift.

5.1.5 Adjoining lands

Whilst fuel management (e.g., hazard reduction burning) lowers bushfire risk under most circumstances, during extreme bushfire attack and with increasing time after a burn, the life and property protection benefit is likely to be minimal. As fuel management programs achieving a satisfactory level of risk reduction cannot be guaranteed, they cannot be relied upon for life and property protection design in a strategic planning context.

6 Technical Assessment

The technical assessment detailed in this section includes six key subsections, followed by an evaluation of the assessment against the strategic planning principles outlined in PBP, and relevant commentary in relation to the Development Control Plan or Master Plan requirements.

6.1 Landscape risk assessment

A landscape risk assessment was undertaken for the Master Plan Application for the Bradfield City Centre and includes assessment of bushfire hazard, potential fire behaviour and bushfire history within the Subject Land and surrounds (Study Area).

6.1.1 Bushfire Hazard

The bushfire hazard has been classified using the methodology prescribed by PBP, through assessment of vegetation, slope and bushfire weather.

The Study Area is situated within a broader landscape comprised predominantly of grassland vegetation, with patches of woodland and narrow corridors of forested wetland vegetation present along the riparian corridors. However, it is expected that revegetation and modification is likely to occur throughout the Master Plan area to reflect proposed land uses. While the Open Space Strategy has been applied to guide this assessment, as planning for riparian areas, conservation areas and open space progresses, these areas should be revaluated.

Vegetation has been classified into Keith Formations and Keith Class (Keith 2004) and assigned a potential total fuel load (tonnes/hectare) using Table A1.12.8 from PBP. **Figure 5** and **Table 7** show vegetation formation as mapped in the Remnant Vegetation of the western Cumberland subregion mapping (OEH, 2013 VIS_ID 4207). Unmanaged rural land is also likely to fall into the PBP grassland hazard class and has therefore been included in **Table 7** below.

Slope was interpolated from 25 cm and 2 m contours and is displayed in Figure 6. The Subject Land is generally flat to undulating, primarily falling within the PBP slope class of >0-5° downslope, with narrow bands of steeper areas associated along the south-eastern boundary, and with the Thompson's Creek riparian corridor. Within the broader Study Area, it is predominately flat to undulating, however there are some isolated steeper lands present to the west of the Subject Land.

Table 7 - Vegetation formation, class and fuel allocation for the Study Area

PBP Hazard Class	Keith Class	Overall Fuel Load (t/ha)[1]
Forest (dry sclerophyll)	Cumberland Dry Sclerophyll forests	36.1
Grassy Woodland	Coastal Valley Grassy Woodland	20.2
Forested Wetland	Coastal Floodplain wetlands	15.1

PBP Hazard Class	Keith Class	Overall Fuel Load (t/ha)[1]
Rainforest	Littoral Rainforest	13.2
Grassland	Exotic and agricultural grassland	6

[1]*From A1.12.8 of PBP*

Figure 5 Vegetation formation derived from OEH Vegetation mapping (OEH, 2013)

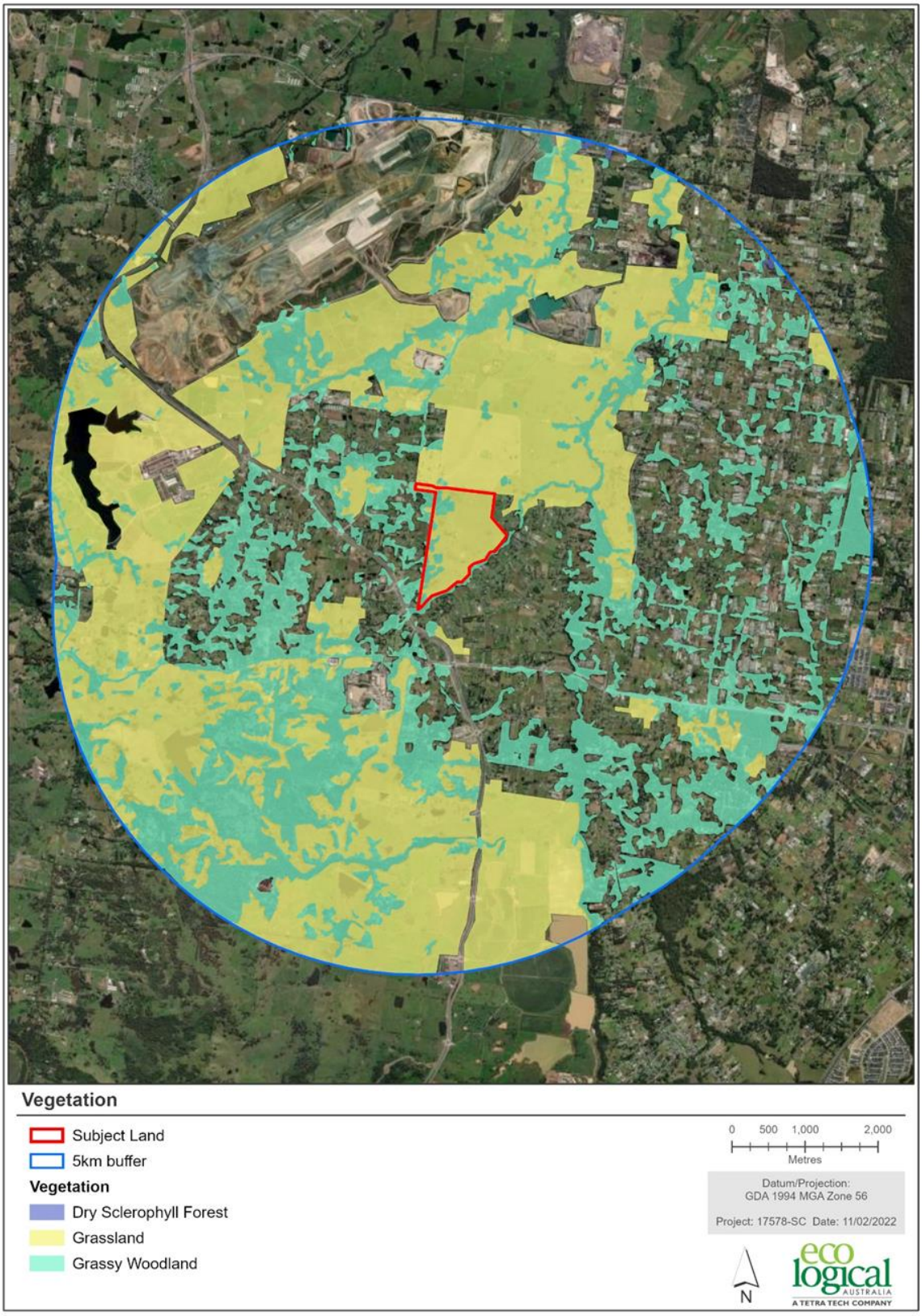
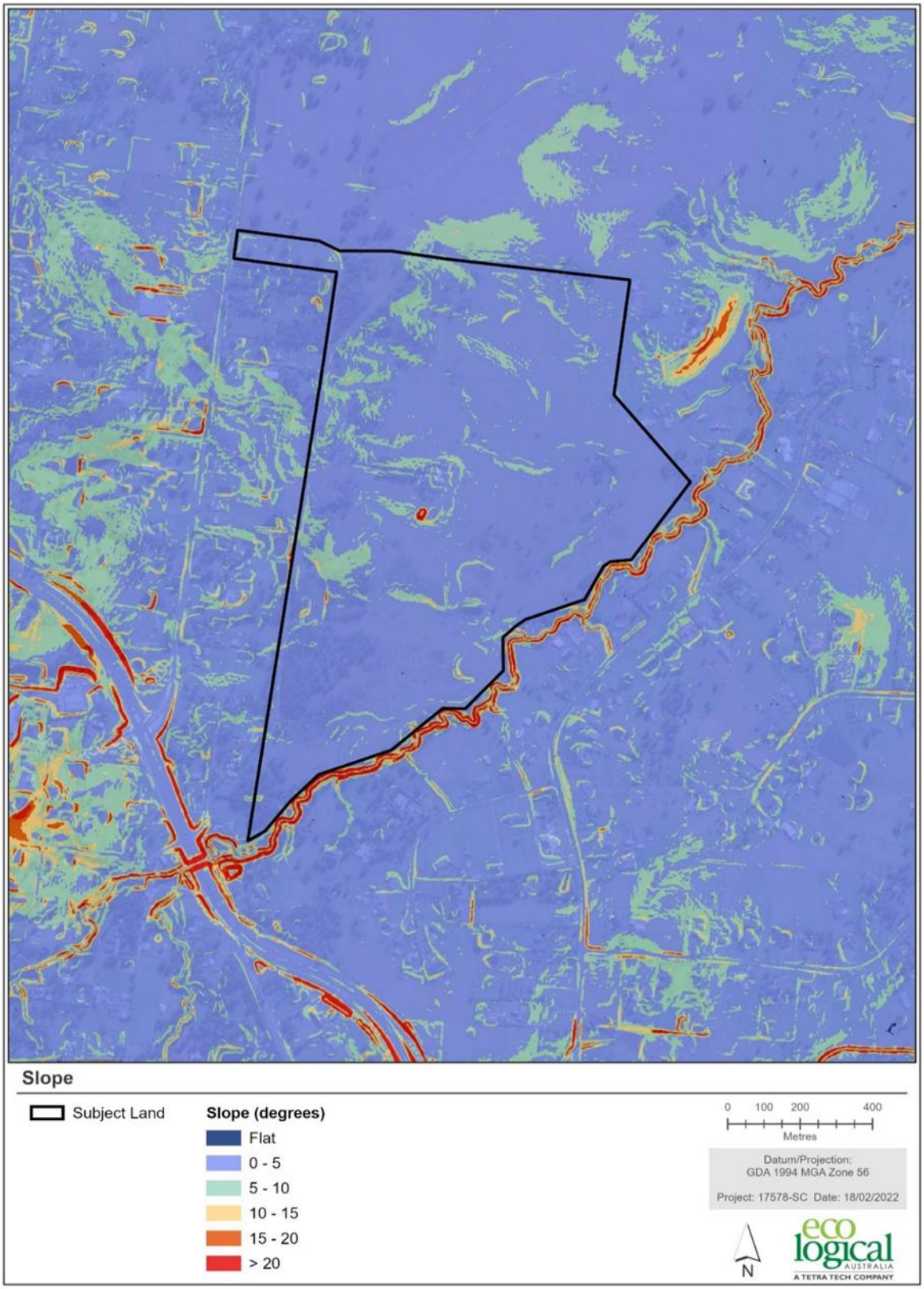


Figure 6 Interpolated slope for the subject land and surrounds derived from 2m contours



6.1.2 Bushfire Weather

The Subject Land is situated within the Macarthur Bush Fire Risk Management Committee (MBFRMC) area. The climate is warm temperate, with higher rainfall generally between January and March (BFMRC, 2012). Relative humidity is generally low throughout the year. Fire danger is greatest in the period following a dry winter and before the onset of summer rain. The gazetted bushfire season generally spans from October to March and conditions during these months include predominant north-westerly winds, high daytime temperatures and low relative humidity. Changing conditions, with strong southerly winds and lightning dominated storms with little rain can also heighten fire conditions.

Bushfire weather is often described in terms of the Forest Fire Danger Index (FFDI) and this metric has a direct influence on the intensity of bushfire behaviour, with a higher FFDI corresponding to weather conditions with potential for higher intensity fires. Weather data analysed by Lucas (2010) under the National Historical Fire Weather Dataset (1972-2020) incorporates the daily FFDI, where suitable inputs are available, from over 70 weather stations across Australia. Days of Very High Fire Danger Rating (FDR) or above, occur on average about 9 days per year based on data analysed from the National Bushfire Weather Data set for Sydney Airport weather station (station number 066037) which is the closest suitable weather station to the site in the dataset compiled by Lucas (2010).

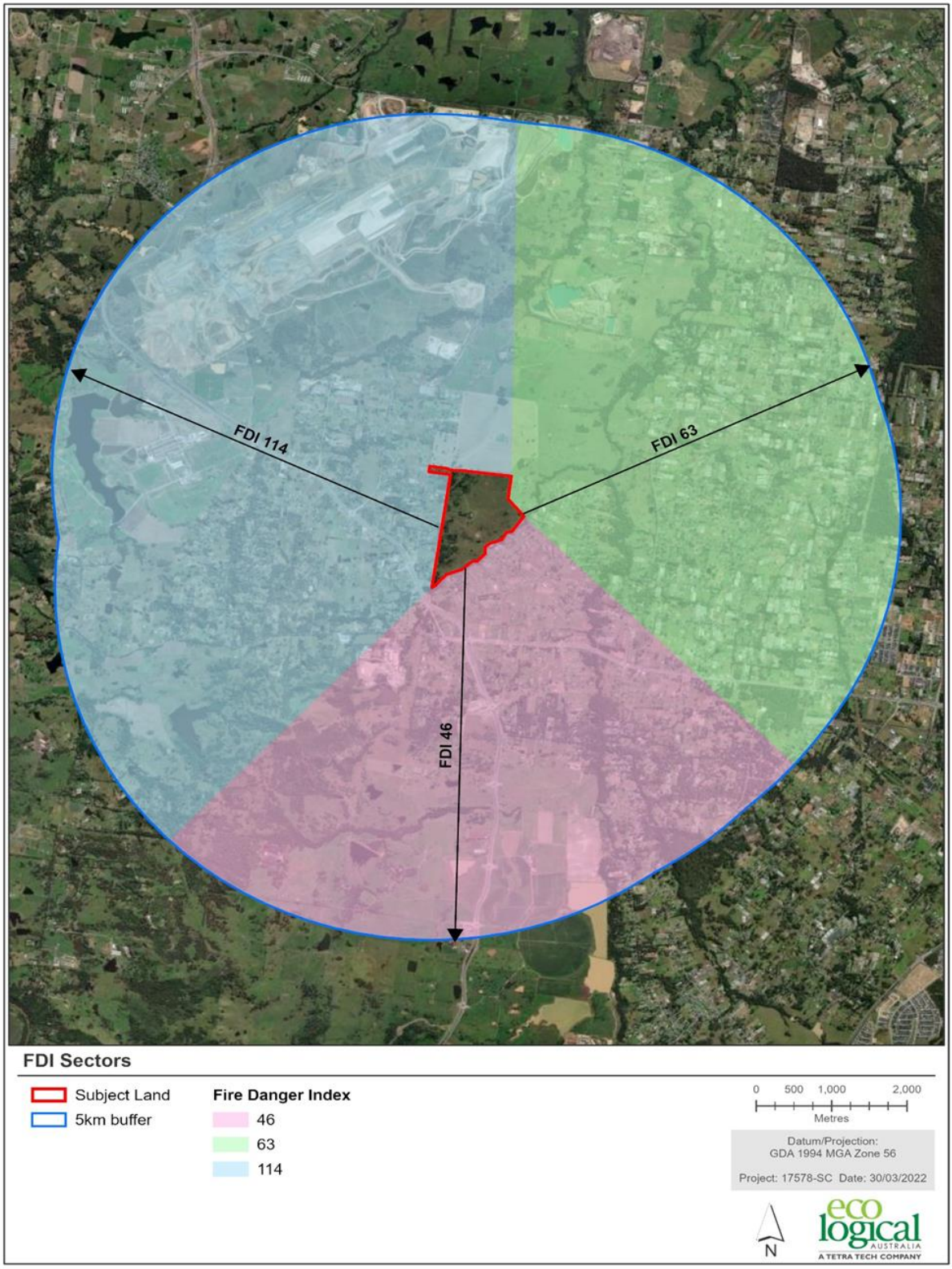
For the purposes of PBP, the FFDI required to be used for development assessment for the site, is 100, as identified for the Greater Sydney Region and Liverpool LGA. The FFDI used by PBP influences certain bushfire protection measures including Asset Protection Zones (APZ) and construction standards via the assessment of the Bushfire Attack Level (BAL).

However, utilising historical data from the Sydney Airport weather station from the National Historical Fire Weather Dataset, and applying the maximum FFDI for a 1 in 50-year event (being the accepted recurrence period for land use planning) provides a better understanding of bushfire weather relevant to the Study Area. To analyse the FFDI for a 1 in 50-year event from the Sydney Airport weather station data, a Generalised Extreme Value (GEV) analysis was undertaken using the process documented by Douglas (2017) and Douglas et al (2014; 2016). The dataset was split into subsets based on identified directions of potential bushfire attack relevant to the site, being North to south-east (clockwise); South-east to South-west (clockwise); South-west to North (clockwise). The following directional FFDIs were identified through the GEV analysis of the historic weather records (1972 to 2020) for Sydney Airport:

- Maximum FFDI for wind directions from the north to south-east was 63;
- Maximum FFDI for wind directions from the south-east to south-west was 46; and
- Maximum FFDI for wind directions from the south-west to north was 114.

This analysis indicates that there is variation in the potential likelihood and consequence of bushfire attack from different directions, toward the Subject Land as shown in **Figure 7**. Areas exposed to bushfire attack at higher FFDI are more likely to be impacted by fire as adverse fire weather will occur more often from those directions and a higher fire intensity is more likely as the weather conditions reach higher FFDI values. For the Master Plan area, aspects exposed to hazards in the south-west to north are more likely to be subject higher FFDI conditions whilst other directions are likely be exposed to bushfire attack at lower FFDIs. However, given the reduced opportunity for extended fire runs from the west given small or fragmented fire catchments, and the ability for the Master Plan and future planning to facilitate bushfire protection measures (APZs, perimeter roads etc), it is considered that there is considerable opportunity to mitigate the exposure of future development to higher fire intensities. Furthermore, as the broader precinct is activated, fire pathways to the subject land from the north and north-west will be removed, and therefore potential exposure to elevated fire intensities in this direction will be reduced or removed.

Figure 7 Directional fire danger index (FDI) analysis



6.1.3 Bushfire Risk Considerations

The following sections outline considerations informing the bushfire risk exposure of the subject land.

6.1.3.1 Bushfire History

According to the Macarthur Bush Fire Risk Management Plan (BFRMP), there are on average 417 fire incidents per annum, however it is only an average of 5 of these fires that progress to major fires (Macarthur BFRMC, 2012).

Exploration of the mapped NPWS fire history and Rural Fire Service fire history mapping datasets since 1970 (DPIE 2021) few wildfires have occurred within the Subject Land and broader Study Area. The fire history shows a historic large wildfire in the north-west of the Study Area, occurring in 2001-02 fire season, part of this fire extent is now under construction for Western Sydney Airport. A bushfire in the 2013 fire season was also recorded within the Thompson's Creek Corridor and surrounding grassland.

Whilst this data may not contain all bushfire, the spatial mapping of fire events indicates that the frequency of large wildfire within the Study area is low, with very few areas subject to repeated wildfire, as evident in Figure 8. Management of the surrounding land along with fire mitigation advantages from infrastructure, existing development and mixed management of rural lands is likely to contribute to the low frequency fire history.

6.1.3.2 Fire Catchment

Delineation of fire catchments helps to identify the location and size of potential fire runs and therefore bushfire attack scenarios for different locations within the Subject Land. This informs assessment of the risk profile across the site, with exposure to larger fire catchments generally resulting in an elevated bushfire risk.

High level analysis of the potential fire catchments influencing the study area was undertaken and as evident in Figure 9, opportunities for consolidated fire pathways extending beyond 2 km is limited due to mixed management of land to the east, south and west, associated with rural residential typologies, Western Sydney Airport construction to the north-west, and industry to the north in Badgerys Creek. Consequently, the primary fire catchments influencing the Subject Land, is the relatively narrow Thompson's Creek corridor to the south and south-east, and grassland to the north and north-east. However, opportunities for these fire pathways will reduce as the broader Aero Core Precinct is activated north of the Bradfield City Masterplan Area, and also to the south-east of Thompson's Creek.

Figure 8 Fire frequency within subject land and surrounding study area

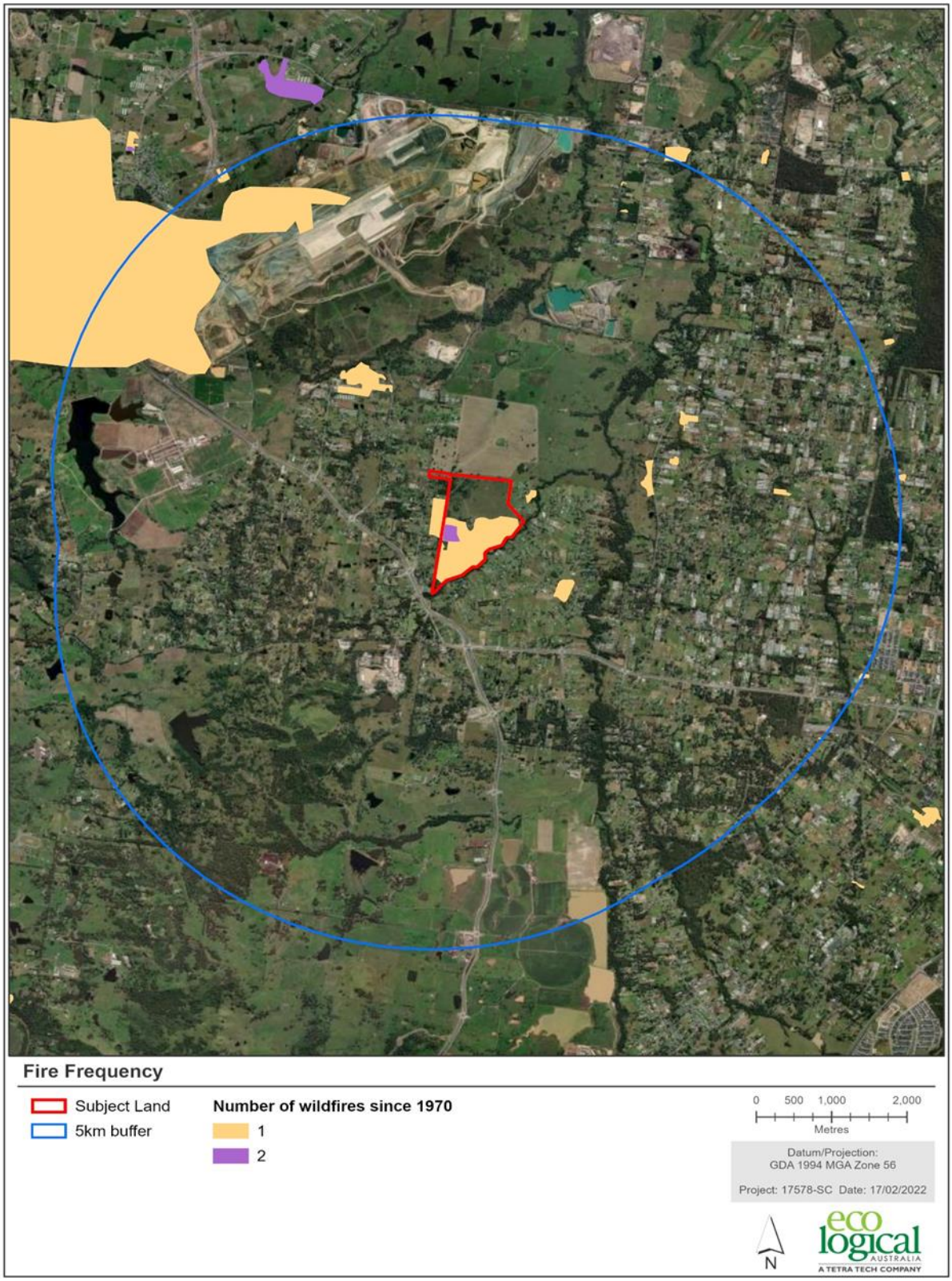
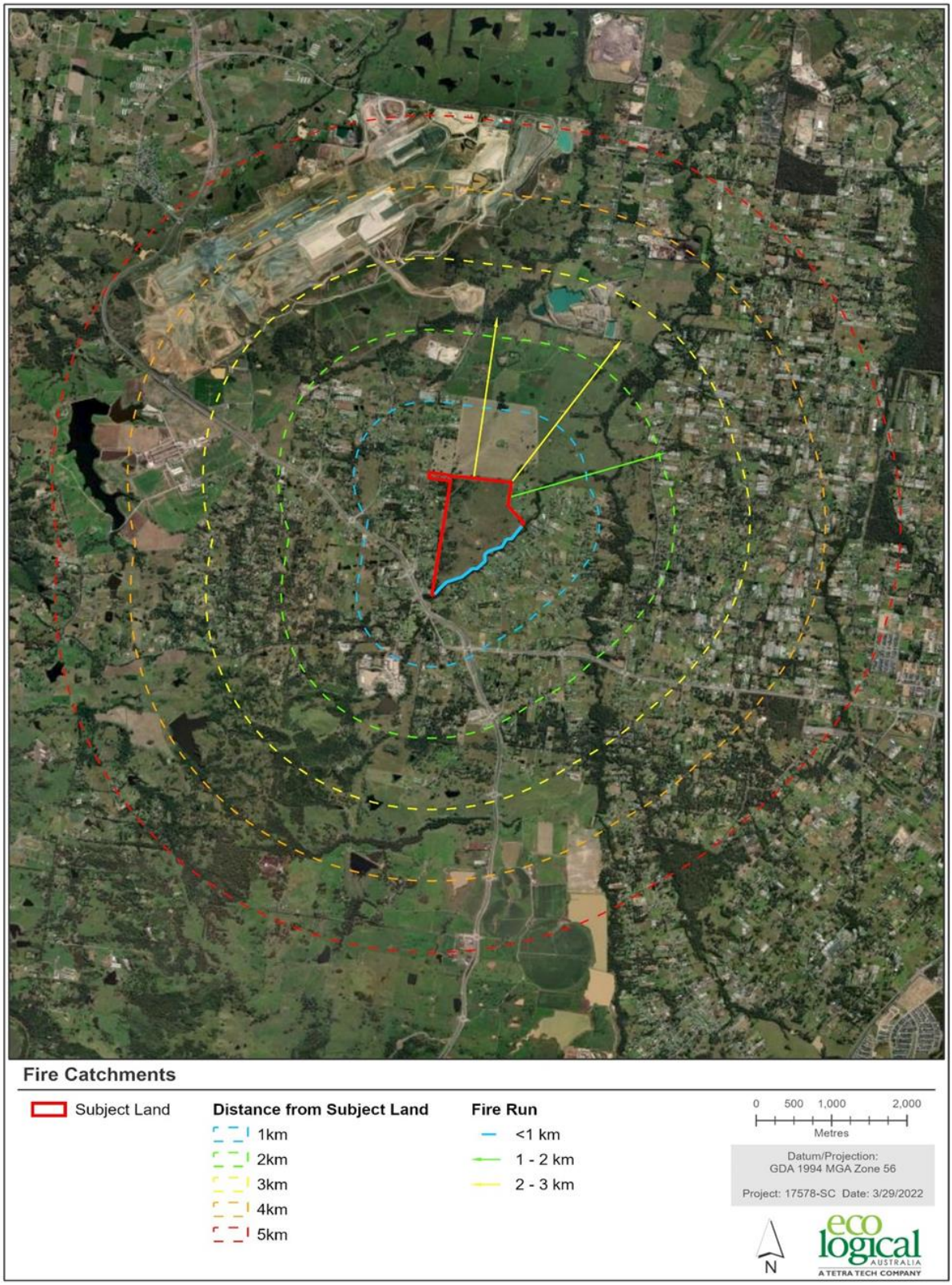


Figure 9 Fire catchments influencing the subject land



6.1.3.3 Potential Fire Behaviour

Whilst each bushfire event is different, fire spreads by responding to changes in fuel, terrain, and weather conditions. Therefore, based on weather analysis, landscape conditions and fire history, potential fire behaviour can be determined. It is generally anticipated that a potential fire within the study area and surrounds, would spread more quickly and have the potential for higher intensities when:

- Burning under the influence of north-westerly winds, during warmer summer months; and/or
- Moving upslope through vegetated areas, such as the Thompsons Creek corridor in the south-east; and
- Burning within unmanaged grasslands.

Fires burning under strong southerly conditions may also have the potential to spread across the Study Area. However, when considering the Open Space Strategy and plan to activate the Thompsons Creek corridor for open space and public recreation, and accompanying management of these areas, at least in part, the mitigated risk in regard to potential fire behaviour is reduced.

6.1.3.4 Bushfire Intensity

Fire intensity across the Study Area is expected to vary based on the hazard (vegetation type, fuel load and terrain) and the directional FFDI outputs derived from the weather analysis discussed in Section 7.1.1 and existing analysis (ELA 2020a; ELA 2020b). Bushfire intensity is a significant determinant of risk to life and property and the controllability of bushfires and therefore important in the consideration of the bushfire risk context, however other factors such as burn duration / residence time and fire size are also important considerations.

Whilst higher fire intensities may occur on steeper slopes and grassland vegetation as highlighted in the existing studies, fire mitigation advantages such as waterways, roads and existing management of rural lands would assist in reducing fire intensity. Coupled with ongoing precinct activation, the direct exposure of future development within the Subject Land to a high intensity bushfire beyond a level that can be planned for is unlikely.

6.1.3.5 Ignition and Fire Spread Scenarios

The Macarthur BFRMP identifies the main sources of ignition in the committee area are misuse of fire and arson related activities (BFMRC, 2012). Other fire ignition sources could include accidental anthropogenic sources such as motor vehicles and escaped backed burning, lightning strikes or arcing of powerlines. Fire activity in the Study Area may be initiated by any of the above sources, with deliberate ignition a consideration for vegetated areas along the urban interface, however as development within the master plan area is activated, opportunities for arson are expected to reduce with changing land use typologies.

Fire management, coupled with the fragmentation of fire paths, means direct fire spread to the Subject Land is considerably mitigated, particularly as the feasibility of onsite Asset Protection Zones (APZs) will increase the currently available setback. Further, while fire spread scenarios vary in each direction, with limited fire activity within and surrounding the Subject Land, the above ignition sources and potential fire pathways are not considered an increased risk for the proposed development that cannot be reduced by mitigation.

6.1.3.6 Changing Climate

Currently, there is no provision in Chapter 4 of PBP prompting consideration of climate change in Bushfire Strategic Studies, nor are there requirements more broadly in PBP. However, it is recognised that

Recommendation 27 of the NSW Bushfire Inquiry 2020 (Resilience NSW, 2022) identifies:

> *"That Government commit to shifting to a strategic approach to planning for bush fire and develop a new NSW Bush Fire Policy similar to the NSW Flood Prone Land Policy in order to accommodate changing climate conditions and the increasing likelihood of catastrophic bush fire conditions; to build greater resilience into both existing and future communities; and to decrease costs associated with recovery and rebuilding".*

While the actions directed by this recommendation are in progress (anticipated target date of quarter 1, 2024 (Resilience NSW, 2022)), this study cannot pre-empt how the outcomes of Recommendation 27 are enacted via PBP, or other regulatory framework. Changing climate conditions have previously been addressed within the existing analysis undertaken for the broader Aerotropolis area (ELA 2020a; ELA 2020b). The analysis considered potential setback distances required under a higher Fire Danger Index (FDI) to achieve a Bushfire Attack Level of BAL-29 (<29 kW/m^2). The result of this analysis indicates that the increase in APZ dimensions varies considerably between vegetation types. For example, woodland and grassland communities, predominant in the Aerotropolis area, an increase in the APZ dimension could range from 1 to 2 metres on gently sloped land, to 4 to 5 metres on steeply sloped land.

While the outcomes of recommendation are in progress, it is recommended that increased setbacks between the hazard and future development are considered as detailed design progresses beyond master planning. This will provide a buffer, should the outcomes of Recommendation 27 result in increased APZ's at the Subdivision /DA stage.

6.1.4 Summary of Landscape Bushfire Risk Assessment

The landscape bushfire risk assessment for the Subject Land and surrounds considered the bushfire hazard including analysed bushfire weather conditions, fire history, fire catchments influencing the site, potential fire behaviour and fire ignition scenarios.

The location of the Subject Land is afforded mitigation advantages to reduced fire pathways and intensity, which is expected to provide further advantage as future development occurs, meaning much of current bushfire hazard and wildfire risk influencing the site will likely not be present at all or will be reduced in extent and connectivity as development of surrounding lands occurs. In evaluating the landscape bushfire risk, the following high-level observations are made:

- There is risk from bushfire attack from the north-west, due to higher FFDI, and historical patterns of bushfire, coupled with predominant north-westerly winds during days of elevated bushfire weather. However, the construction of the Western Sydney Airport, provides a considerable mitigation advantage in this direction, meaning fires initiating further afield in this direction have limited opportunity to impact the site, resulting in a reduced fire pathway.
- There is opportunity for fires to initiate in rural grasslands to the north and north-east, however based on FFDI analysis, it is likely to be of reduced fire intensity. Also, current and future development is expected to fragment the fire catchment, minimising risk.
- There is opportunity for bushfire attack from the south-east within the Thompson's Creek corridor, however based on FFDI analysis, it is likely to be of reduced fire intensity. Additionally master planning of corridor land uses can assist in mitigating this risk.
- There are significant interruptions to the continuity of bushfire hazard in all other directions and fragmentation of the bushfire hazard is expected to increase as the precinct is developed.
- Fire history mapping supports a lower risk of bushfire impacting the master plan area.

6.2 Land Use Assessment

PBP outlines broad principles and assessment considerations for the Master Plan Application for the Bradfield City Centre. It also specifies that bushfire protection measures (BPMs) need to be considered during master planning stage, to ensure that the future development can comply with PBP, as per the specified BPMs in Chapters 5-8 of PBP. This land use assessment therefore considers the risk profile of the proposal, the suitability of proposed land uses and the feasibility of APZ requirements.

The assessment has considered the future landscape of the Master Plan area, based on the preliminary structure in the preliminary Open Space Strategy and proposed land uses. During detailed design, and as planning progresses it will also be necessary to consider any temporary hazards that may remain, and temporary bushfire protection measures implemented where necessary. This is not unusual for large scale developments where activation occurs across various stages, and it is expected that any changes to the risk profile considered in this assessment would be mitigated by appropriate bushfire protection measures.

6.2.1 Risk profile

The feasibility of the proposal to comply with the BPMs identified within PBP is a fundamental consideration of the study. While BPMs and their performance criteria are a benchmark for approval of a development, a strategic bushfire study needs also to evaluate these measures within the landscape risk context. This strategic bushfire study has therefore considered the following:

- The bushfire landscape risk context in consideration of the protection measures for future development and their potential adequacy;
- The type/s of development proposed, and their suitability given the bushfire risk context;
- The pattern and potential bushfire resilience of the bushland interface; and
- Potential cumulative risk associated with proposed development in the locality.

Consideration of BPM for the purpose of this study has included review of the capacity for:

- Asset Protection Zones (APZs), where if implemented, the indicative APZs will provide a maximum exposure of Bushfire Attack Level (BAL)-29 for residential and BAL-12.5 for Special Fire Protection Purpose (SFPP), discussed in Section 6.2.1.1 below;
- Access – discussed in Section 6.3;
- Water Supply and Utilities – discussed in Section 6.5;
- Landscaping – to be detailed at future stages;
- Building Construction and design – to be detailed at future stages; and
- Emergency management – discussed in Section 6.4.

The feasibility of the subject land to provide for APZ, a key bushfire protection measure, is assessed in the following section. This is followed by an evaluation of the proposed land uses. It is expected that compliance with BPM as per the requirements of PBP will be achievable for future development.

6.2.1.1 Feasibility of Asset Protection Zones

Based on the bushfire hazard assessment, an assessment of the feasibility of PBP compliant APZs has been undertaken. The indicative residential APZ requirements are shown in **Figure 10**. **Table 8** includes the minimum dimensions required by the Acceptable Solutions of PBP for residential development (i.e., 29 kW/m^2) and SFPP development (i.e. 10 kW/m^2). The placement of future SFPP development (e.g., schools, hospitals, child care

centres) or public assembly buildings >500 m^2 will need to ensure the extended APZ requirements specified in Table A1.12.1 of PBP can be implemented.

All APZs will need to be managed in perpetuity, and whilst they are feasible within the developable area, there is opportunity for managed open space to be utilised for APZs and also offer increased hazard setback, particularly where future land uses can achieve APZ requirements without encumbering authorities with considerable management, (e.g., active transport links, paved plaza areas, planned managed lawns etc.).

Where APZs are positioned in open space zones, a management plan can be established to ensure APZs are maintained in perpetuity and to the appropriate standard as per the requirements of PBP. Additionally, a vegetation management plan will also assist in hazard management along the hazard / APZ interface. Future legislative provisions to achieve management of open space areas should be considered, including the requirement of community title where Council or WCPA will not be the managing authority. The following considerations and assumptions are made in relation to the mapped APZs:

- Vegetation formation in the assessment is based on existing mapping by (OEH 2013) and Biosis (June, 2023).
    - On review of the OEH Vegetation Identification System (VIS), *Swamp Oak open forest on river flats of the Cumberland Plain and Hunter valley* as mapped by Biosis was not found to be an active Plant Community Type (PCT) and therefore for the purpose of this assessment, ELA has assumed this vegetation meet the PBP vegetation classification of forested wetland (excluding Coastal Swamp Forest).
- Preliminary assumptions in this assessment regarding the future bushfire hazard are based on the Open Space Strategy and likely vegetation management or revegetation. Further details are provided in Table 9.
- All APZs are assumed to be on land less than 18 degrees.
- Additional revegetation within the subject land may result in changes to the hazard assessment and APZ requirements.
- Changes to topography resulting from earthworks have not been considered and may alter the slope assessment, and there APZ outcome.
- Transect 1 is based on a temporary external grassland hazard, and therefore the APZ requirement can be removed when the remaining hazard is removed. All other external hazards, aside from planned conservation areas as shown in Figure 10 as woodland, are assumed to be managed.
- The bushfire hazard and APZ requirement should be re-evaluated as planning progresses.
- The open space area in the southeast of the precinct has conservatively been considered woodlands for the purpose of this study. As planning progresses, confirmation of the vegetation structure in this area is required to determine whether this area constitutes grassland.
- Confirmation of stormwater basins will also be required.

Table 8 - Indicative Asset Protection Zones for residential and Special Fire Protection Purposes

Transect #	Vegetation[1]	Slope[2]	Residential APZ (PBP)[3]	SFPP APZ (PBP)[4]
1	Grassland	0-5 downslope	12m	40m
2	Forested Wetland	0-5 downslope	12m	42m
3	Forested Wetland	0-5 downslope	12m	42m
4	Woodland	0-5 downslope	16m	50m
5	Woodland	0-5 downslope	16m	50m
6	Woodland	0-5 downslope	16m	50m
7	Woodland	0-5 downslope	16m	50m
8	Woodland	0-5 downslope	12m	50m
9	Grassland	0-5 downslope	12m	40m
10	Forested Wetland	0-5 downslope	12m	42m
11	Forested Wetland	0-5 downslope	12m	42m
12	Forested Wetland	0-5 downslope	16m	42m
13	Woodland	Upslopes/flat land	12m	50m
14	Woodland	0-5 downslope	16m	50m

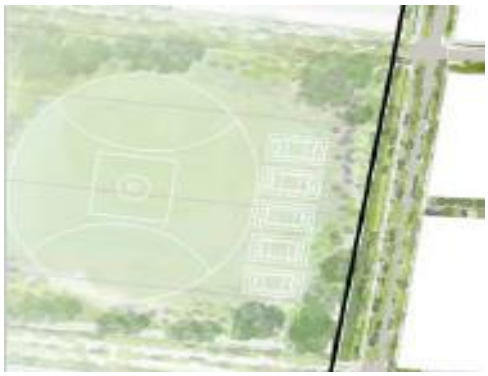
[1] *Predominant vegetation is identified, according to PBP.*

[2] *Slope most significantly influencing the fire behaviour of the site having regard to vegetation found as per PBP.*

[3] *Assessment according to Table A1.12.2 of PBP.*

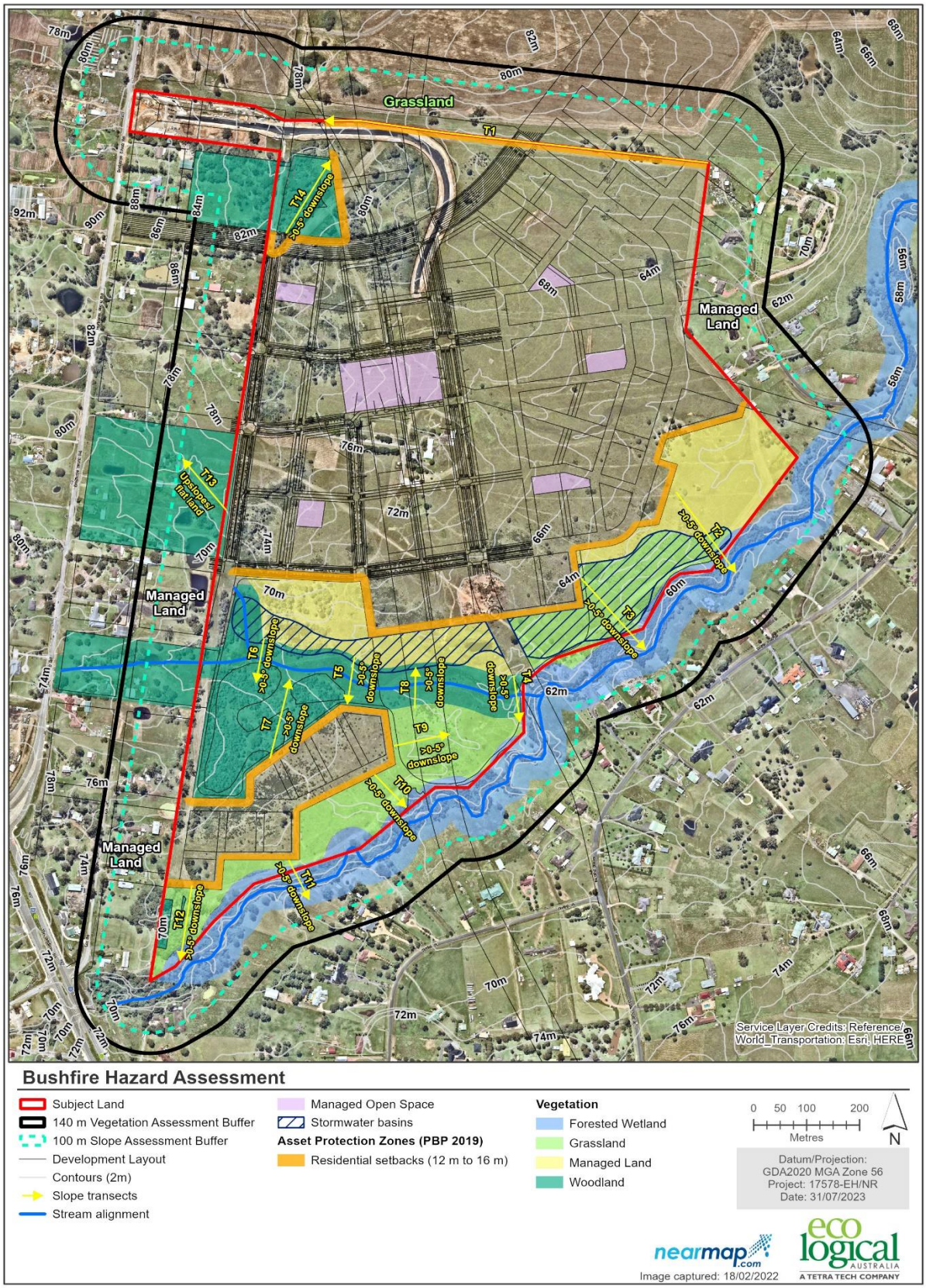
[4] *Assessment according to Table A1.12.1 of PBP.*

Table 9 - Evaluation of landscape structure identified in the preliminary Open Space Strategy

Area	Open Space Strategy	Assessment Comment
Ridge Park		Retained existing native vegetation (woodland) and high amenity space and useable open space. Area assessed as woodland.
Central Park		Outdoor areas for meetings, socialising and collaboration. Area considered managed land.
Sports Field		Assessed as woodland (presenting worst case scenario). Assumed Woodland around perimeter of sports field for canopy/shade. It is noted that the sports field earmarked by the Precinct Plan is primarily located outside of the subject site.
City Walk and Green Loop		Area considered managed land with functional walkways and areas for activities.

Local Parks		Local Parks considered managed lands with functional land uses activities associated without recreation. Managed open space
The Parklands		Existing native vegetation (env) area and riparian corridors considered a hazard and assessed as woodland /forested wetland. Areas outside of these areas considered managed land, including the event space in the parklands east and water promenade and swimming area in the parklands west.

Figure 10 Indicative bushfire hazard assessment based on preliminary Open Space Strategy



6.2.2 Land use evaluation

Future development on BFPL will need to satisfy the performance criteria identified in PBP for various land uses. At master planning, it is expected that future land uses enabled by the proposal can accommodate the acceptable solutions identified in PBP to minimise reliance on performance solutions at the DA stage. A summary of these requirements is outlined below and evaluated for the master plan in Table 10.

Under the planning pathway identified in PBP and as legislated, the CDC pathway is not possible for subdivision, SFPP development and where the acceptable solutions of PBP cannot be met. Therefore, it is expected that a variety of future land uses will be assessed against the requirements of PBP following the DA pathway.

6.2.2.1 Chapter 5 of PBP – Residential and Rural Residential Subdivision

Mixed use residential development is envisaged for much of the master plan, and therefore it is anticipated that future residential land uses will be subject to the requirements outlined in Chapter 5 of PBP. Following master plan approval and as part of the DA process, future development will need to demonstrate the suitability of the proposed subdivision. The following provisions will need to be considered:

- Provision of compliant APZs;
- Access and egress within the developable land and along the adjoining public road system shall include safety provisions for attending emergency service vehicles and evacuating residents;
- Future subdivision design shall include perimeter roads separating developable lots from hazardous bushland areas;
- Access is to be ensured for maintenance of APZ and other fire mitigation activities;
- Firefighting water supply; and
- Provision of access and infrastructure requirements according to Table 5.3b of PBP.

6.2.2.2 Chapter 6 of PBP – SFPP Development

Special Fire Protection Purpose (SFPP) provisions will be applicable to future uses such as childcare centres, tourist accommodation, education facilities, hospitals, seniors living, and any other development specified as SFPP under s.100B (6) of the RF Act or Section 46 of the RF Reg. These developments would need to meet the criteria outlined in Section 6 of PBP including:

- Increased APZ setbacks (as per Table 8 above);
- Provision of a Bush Fire Emergency Management and Evacuation Plan; and
- Provision of suitable access and utilities according to Tables 6.8a-c of PBP.

These provisions are applicable when seeking the above land uses and will be addressed at future DA stage.

6.2.2.3 Section 8.3.1 of PBP - Buildings of Class 5 to 8 under the NCC /Section 8.3.10 Commercial and Industrial Development

As per the NCC building classification system, buildings such as offices, shops, factories, warehouses, and other commercial or industrial facilities on BFPL have no specific bushfire requirements, and as such *Australian Standard AS 3959-2018* and the *National Association of Steel-framed Housing* (NASH) Standard '*Steel Framed Construction in Bushfire Areas 2014*' are not deemed to satisfy (DTS) provisions. However, such developments still need to meet the aims and objectives of PBP and consider the following:

- Provision of appropriate APZ / defendable space;
- Provision of safe access to/from the public road system for egress and evacuation;
- Provision of suitable emergency and evacuation arrangements for occupants;
- Provision of adequate water supply to protect the building, and the location of gas and electricity supplies so they do not contribute to the bushfire risk; and
- Provision for the storage of hazardous materials away from any hazards.

In meeting the objectives of PBP, these developments can apply the APZ requirements for residential. General access and infrastructure requirements listed in Table 7.4a of PBP should also be considered. Where future mixed-use development includes residential development, the bushfire protection measures requirements outlined in Chapter 5 of PBP (for subdivision) or Chapter 7 of PBP (for infill development) will apply. Where future mixed-use development includes SFPP uses, bushfire protection measures should be consistent with the provisions outlined in Chapter 6 of PBP.

6.2.2.4 Section 8.3.11 – Public Assembly Buildings

Where a public building has a floor space greater than 500 m^2 it may be considered an assembly building, and due to the evacuation of a large number of people, this type of development is generally treated as SFPP. This could include future community and recreation facilities. To meet SFPP requirements, future developments of this nature on BFPL would need provisions for APZs that meet a maximum Radiant Heat Flux (RHF) of 10 kW/m^2 and a construction standard of BAL-12.5, along with other requirements as per Section 4.1.2.2.

6.2.2.5 Section 8.2.2 Multi-storey residential development

Residential buildings exceeding three storeys in height are considered multi-storey buildings by PBP and are required to comply with the performance criteria within Chapter 5, including the requirement for an APZ which meets a threshold of 29 kW/m^2. In addition, the following issues need to be considered as per Table 8.2.2 of PBP.

- Higher residential densities for evacuation and increased demand on road infrastructure during evacuation;
- Avoiding locating high rise buildings in higher elevations or on ridge tops;
- Higher external façade exposed to bushfire attack;
- Additional fuel loading from car and storage facilities;
- Potential for balconies and external features to trap embers and ignite combustible materials; and
- Increased exposure to convective heat due to height.

A performance based solution including a bushfire design brief may be required for Development Applications pertaining to multi-storey residential developments on bushfire prone land.

6.2.3 Summary of land use evaluation

Table 10 below provides a summary of the land use evaluation for differing development types.

Table 10 - Future land use evaluation

Development Type	Assessment Considerations	Suitability
Residential Subdivision	The land use evaluation has considered potential land uses enabled by the rezoning and with consideration to: • The risk profile of the site • Proposed land use zones and permitted uses • The most appropriate siting for different land uses based on the risk profile • The impact of the siting of these uses on APZ provision	It is anticipated that different residential typologies can comply with PBP. Perimeter roads will need to be demonstrated once final hazard extent determined, particularly along the southern riparian corridor.
SFPP Development		Requirements for SFPP development have been considered and suitable areas are feasible within the precinct, with suitable areas outside of the SFPP APZ. Perimeter roads will need to be demonstrated once final hazard extent determined, particularly along the southern riparian corridor.
Buildings of Class 5 to 8 under the NCC /Section 8.3.10 Commercial and Industrial Development		No specific requirements apply however the aims and objectives of PBP can be achieved for future land uses. Where ground floor retail occurs in conjunction with residential development, then PBP requirements for residential development should apply.
Public Assembly Buildings		Requirements for SFPP development have been considered and there are suitable areas outside of the required SFPP APZ.
Multi-storey residential development		Future development is feasible outside of the 29 kW/m^2 APZ or greater and other relevant considerations can be addressed at site selection stage and subsequently at detailed design phase, therefore future multi-storey development is achievable. Future development will need to consider design aspect and material at detailed design to comply with the requirements in section 8.2.2 of PBP. Perimeter roads will need to be demonstrated once final hazard extent determined, particularly along the southern riparian corridor.

6.3 Access and Egress

As this assessment is for the Master Plan Application for the Bradfield City Centre, a detailed assessment of proposed roads is not possible. However, it is anticipated that access roads, including perimeter roads, will be provided and compliant with the requirements of PBP as per Table 5.3b and Table 6.8b. Perimeter roads are generally identified in the masterplan (**Figure 3**). Pending the final typology of the open space adjacent to the proposed 'Civic Cultural' area, perimeter access should be provided either within the developable area, or within the Open Space where there should be opportunity.

It is understood that during early activation, commercial development is the key focus, with no residential development planned prior to 2026. Early stages of residential development will facilitate low capacities, with only 3000 residents anticipated by 2036, and in the longer term, up to 15,000 residents which will align with the planned establishment of the broader road network as detailed in Table 9 of the Transport Management Accessibility Plan (TMAP) (AECOM, 2023).

Furthermore, as the developable area will primarily be unencumbered by bushfire prone land (due to ongoing development removing any 'bushfire hazard'), and not subject to the requirements of PBP, the focus of this review is to ensure there are multiple access routes away from the hazard to facilitate evacuation of development adjacent to the hazard interface, and to make recommendations around access provisions for evacuation and emergency services.

6.3.1 Evaluation of Access and Egress

Strategic planning considerations as outlined in Chapter 4 of PBP require the following assessment considerations:

- Capacity of the proposed road network to deal with evacuating residents and responding emergency services, based on the existing and proposed community profile;
- The location of key access routes and direction of travel and;
- The potential for development to be isolated in the event of a bushfire.

The Master Plan provides fluid opportunities for land uses, and as demonstrated in the masterplan, there is opportunity to accommodate perimeter roads within the developable area adjacent to final bushfire hazards, or by adapting the current open space interface for the provision of perimeter roads should the hazard extent and/or typology change as detailed design is finalised.

The proposed road network, as per the current Master Plan (Figure 3) and Open Space Strategy, provides perimeter arterial and sub-arterial road access to the west north and east, along with a southern connection (Figure 3), which would provide egress options for future occupants as well as ingress for emergency services, and enable provision for APZs in these areas.

In regard to the location of key routes and direction of travel, ingress and egress to the Subject Land will primarily occur via Badgerys Creek Road in the west, primary arterial road (rapid bus) in the north, Whittaker Road in the east, and a future southern connection across Thompsons Creek. This enables opportunity for egress in multiple directions, although once the Bradfield City Centre is active, it is expected that egress will be primarily via proposed internal roads to the town centre.

Perimeter access meeting the requirements set out in Table 5.3b of PBP should be finalised as detailed design progresses. This is likely to include revision of the open space / development interface in the south, particularly the south-west corner of the Master Plan area. However, as these areas form part of the latter stages of precinct activation, the current high level access network is not considered an impediment to the feasibility and activation of early stages. It is noted that the TMAP (AECOM, 2023) identifies a hierarchy for

road user space which prioritises active transport modes, along with public transport. While this is supported in principle, it is paramount that road widths and traffic calming strategies do not impede the capacity for perimeter roads to meet the requirements of PBP, nor impede the requirements for emergency service access. In addition, as planning progresses, potential for vehicle use on key evacuation routes must not be compromised within future areas of the precinct that will be encumbered by bushfire prone land.

6.3.2 Evacuation

The need for off-site evacuation for the proposal is not considered high, given the lower bushfire risk setting, particularly as precinct activation progresses. However, if off-site evacuation was necessary during varying stages of activation, it is expected that the existing and proposed arterial and sub-arterial roads will be available to provide multiple route options including out of precinct city centres during early precinct activation, or new evacuation points such as the Bradfield CBD, or nearby Neighbourhood Safer Place's (NSPs) or future NSP's, should these be considered appropriate by RFS.

Whilst there are currently limited NSPs located within close proximity to the Subject Land (**Table 11**) (**Figure 11**), it is expected that the Bradfield City Centre will provide suitable options for future evacuation points that are situated well outside of future bush fire prone land. Indeed, managed open space, shopping centres and community greater than 300-700m from the hazard interface, would provide future suitable evacuation options. The feasibility of the developable area to meet such requirements, given the scale of the master plan and planned nature of the city, along with staged activation supported by the future road network, suitable evacuation is not considered unachievable.

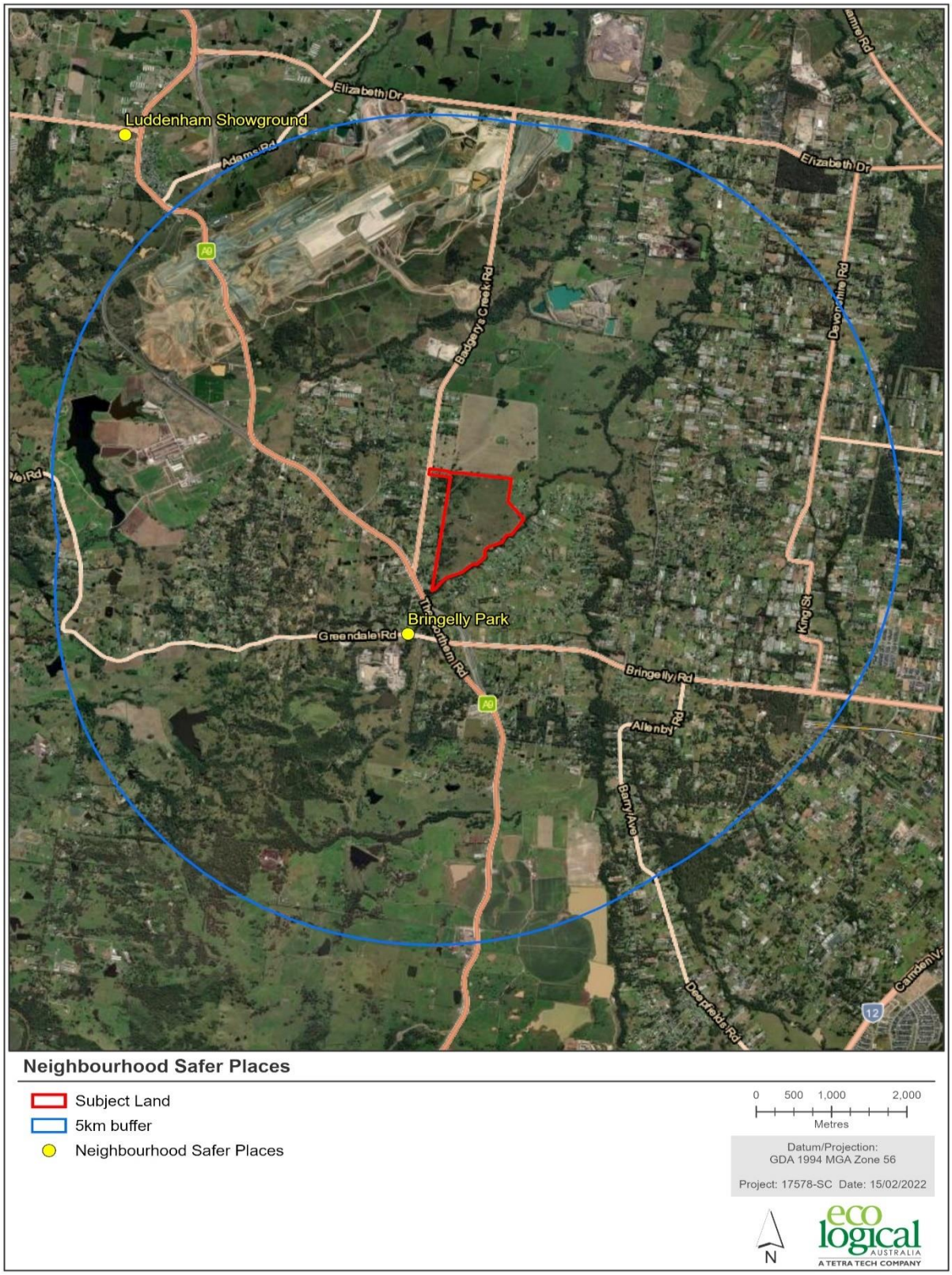
Further, the outcomes of traffic modelling (AECOM, 2023) undertaken to date indicate that the level of service (LoS) of the Bradfield City Street network in 2036 can met the general acceptable target LoS for new intersection performance. While it is noted that by 2056, the road network is nearing capacity, as much of the precinct will be unincumbered by bushfire once fully activated, the need for offsite evacuation will be reduced, and increasing onsite evacuation opportunities will be presented. As such it is considered that the masterplan offers a high level of bushfire resilience and evacuation is not considered a constraint to the proposal. It is however recommended, that as precinct planning progresses to staging, that specific traffic studies are undertaken to ensure primary evacuation routes provide a level of capacity to compliment the level of occupation.

Table 11 - Existing NSPs in vicinity of study area

NSP	Suburb	LGA	Type	Travel Distance (km)	Travel Time (min)
Luddenham Showground	Luddenham	Penrith	Open space	9.7	9
Bringelly Park	Bringelly	Liverpool	Open space	2.8	3

[1] *accessed from https://www.rfs.nsw.gov.au/plan-and-prepare/neighbourhood-safer-places;* [2] *estimate using Google Maps*

Figure 11 Existing Neighbourhood Safer Places (NSPs)



6.4 Emergency Services

The Master Plan Application facilitates future development of the Bradfield City Centre within the Western Sydney Aerotropolis. Therefore, the suitability of the proposal with regard to emergency management and meeting the objectives and strategic planning principles of PBP, was reviewed with consideration to the future ability to meet:

a. Increase in demand for emergency services responding to a bushfire emergency including the need for new stations / brigades; and
b. Impact on the ability of emergency services to carry out the suppression in a bushfire emergency.

It is expected that requirements for additional resources for the region will also be assessed as part of broader emergency management planning for the Western City Aerotropolis, and therefore any projected increase in demand facilitated by precinct development is expected to be accounted for in broader planning and development contributions. It is recommended that discussions with the relevant emergency service agencies are undertaken to determine funding and resource requirements for the provision of additional services. It is also important that staged activation of the master plan considers the adequacy of emergency services available at each stage.

Currently, there are four RFS stations within 10 minutes travel time (**Table 13**, **Figure 12**). It is expected that as planned road networks are activated, travel time for nearby stations will reduce. Additionally, as the broader precinct is activated, it is anticipated that a transition from RFS to Fire and Rescue (FRNSW) support will occur, and broader planning has considered the capacity and future requirement for emergency services as activation progresses (GHD, 2022). Therefore, it is expected that the current FRNSW capacity will increase in personnel and infrastructure, and it is recommended that a timeline for this transition is discussed with the relevant stakeholders.

Regarding the impact of future development on the ability of emergency services to carry out fire suppression in a bushfire emergency, as the Master Plan area is just one component of broader regional planning, no key constraints for future development for emergency services are anticipated, however, it is noted within this report that planned activation of additional services should be scheduled with the relevant stakeholders and authorities.

The compliance of these aspects will be assessed for each future development against the requirements of PBP. As such, the Master Plan Application is not deemed to facilitate inappropriate development in regard to the adequacy of emergency services.

It is recommended that key ingress routes are identified for emergency services are prioritised for this purpose in the TMAP as planning progresses.

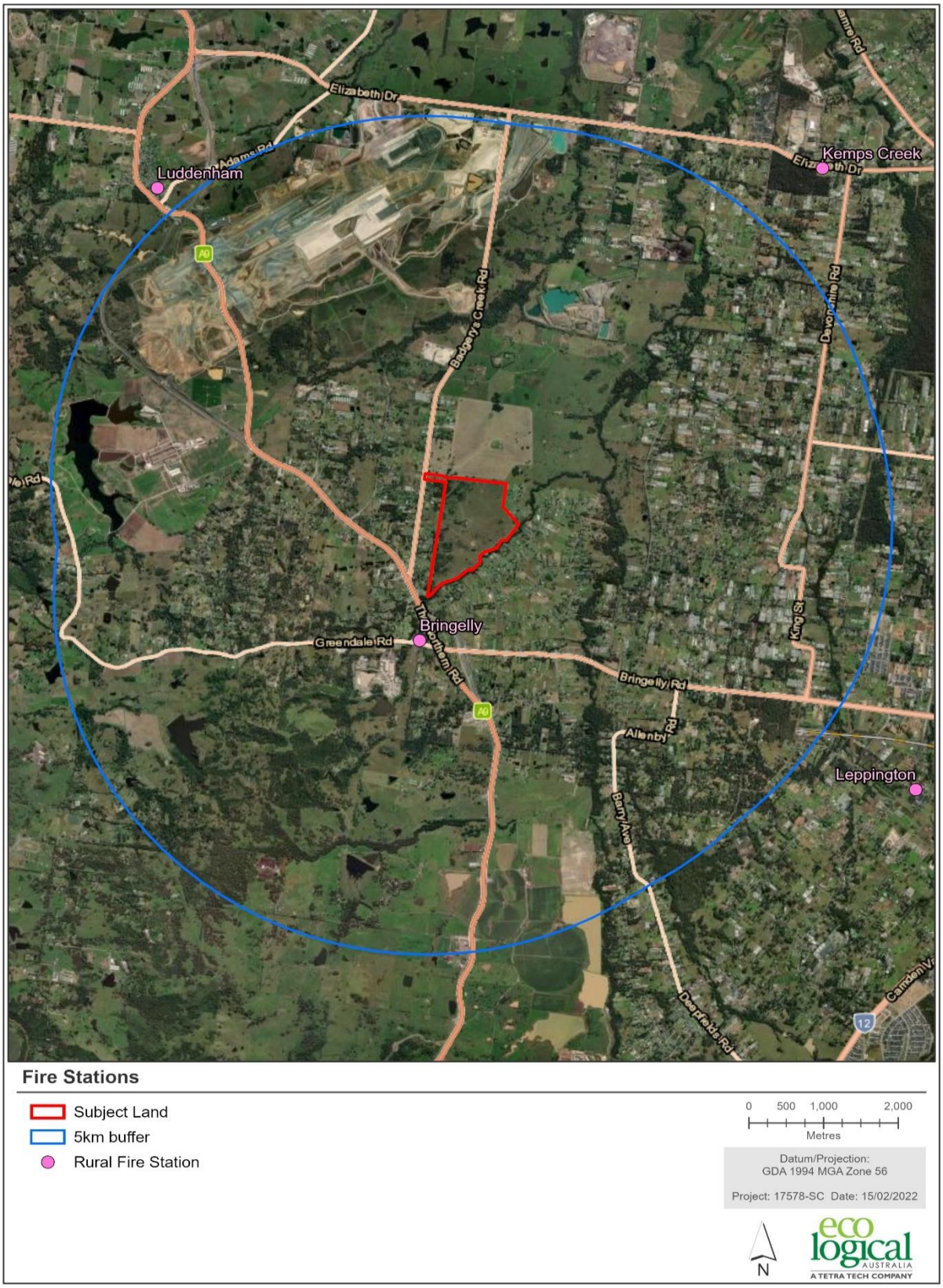
Table 12 - Fire Stations within proximity to the site

Type	Station	Distance (km)	Travel time (min)*
RFS	Bringelly	2.7	3
RFS	Luddenham	9.1	9
RFS	Kemps Creek	9.5	10
RFS	Leppington	9.9	10
RFS	Catherine Field	11.9	12
RFS	Wallacia	14.3	13

Type	Station	Distance (km)	Travel time (min)*
FRNSW	Horsingsea Park	12.7	14
RFS	Cobbitty	15.7	15
RFS	Middleton	13.5	16
RFS	Theresa Park	20.5	20
RFS	Horsley Park	20	20
FRNSW	St Andrews	21	22
RFS	Mulgoa	25.7	23

**Travel time from Google Maps*

Figure 12 Existing Rural Fire Stations



6.5 Infrastructure

Future development on the Subject Land will need to meet the applicable requirements of PBP relating to infrastructure provision. The general requirements for development are discussed below and are considered achievable for this site. Specific requirements for SFPP developments and subdivision are detailed in PBP.

Strategic planning requirements seek to identify any potential issues associated with infrastructure and utilities. Key considerations on suitability of infrastructure to meet the requirements of PBP include the ability of the reticulated water system to deal with a major bushfire event in terms of pressures, flows, and spacing of hydrants and life safety issues associated with fire and proximity to high voltage power lines, natural gas supply lines, etc. These aspects are explored below, and the acceptable solution requirements are detailed in Table 5.3 and Table 6.8 of PBP.

6.5.1 Water

To comply with PBP, future development should be serviced by a reticulated water supply. Fire hydrant spacing, sizing and pressures should comply with AS 2419.1 – 2005 'Fire hydrant installations – Part 1: System design, installation and commissioning (SA 2005). Where this cannot be met, the RFS will require a test report of the water pressures anticipated by the relevant water supply authority. In such cases, the location, number and sizing of hydrants shall be determined using fire engineering principles. Fire hydrants should not be located within any road carriageway. All above ground water and gas service pipes external to any buildings are to be metal, including and up to any taps. Where reticulated water cannot be provided a static water supply for firefighting purposes is required on site for each occupied building in accord with the capacities outlined in PBP.

Further detail regarding water supply requirements is detailed in PBP and acceptable solution requirements for water supply are expected to be achievable for future development within the subject land.

6.5.2 Electricity and gas

It is expected that future electricity supply to the Subject Land will be underground where possible and compliant with PBP. If existing or future electrical transmission lines to the subject land are above ground, the following requirements apply:

- Lines are installed with short pole spacing (30m), unless crossing gullies, gorges or riparian areas; and
- No part of a tree is closer to a line than the distance set out in accordance with the specifications in ISSC3 'Guide for the Management of Vegetation in the Vicinity of Electricity Assets' (ISSC3 2016).

If required, reticulated or bottled gas is to be installed and maintained in accordance with Australian Standard AS/NZS 1596:2014 'The storage and handling of LP Gas' (SA 2014) and the requirements of relevant authorities (metal piping must be used).

Further detail regarding electricity and gas requirements detailed in PBP. The acceptable solution requirements for these services are expected to be achievable for the future development within the study area contemplated by the Master Plan Application.

6.6 Adjoining Land

Future development contemplated by the Master Plan Application should not compromise any offsite bushfire management works. Given the adherence to PBP that is required, any future development should also not require a change to the bushfire management practices for retained and/or adjoining bushfire prone vegetation. Additionally, there is capacity for all APZ's to be wholly within the Subject Lands or provided by public roads. Therefore, there are no concerns regarding the impact of the proposal on adjoining land.

7 Recommendations

7.1 Assessment of Strategic Planning Requirements

This section evaluates the proposal, against the bushfire strategic planning requirements of PBP (detailed in Section 1.6) and based upon the assessment findings in the preceding sections, to determine whether:

- The proposal poses an unacceptable risk or provides for inappropriate development;
- Future development can adequately respond to the bushfire threat; and
- Future development can provide adequate bushfire protection measures to reduce the residual risk to an appropriate level.

The evaluation is based upon Chapter 4 of PBP and the Assessment Framework of this Study, as summarised in Table 9. In addition to evaluating the proposal against these matters, the evaluation specifically considers:

- Residual risk - the level of residual risk after the application of bushfire protection measures is a key determinant in the strategic assessment of whether proposed development is appropriate;
- Risk to life - an appropriately low residual risk to human life is fundamental;
- Risk to property – the residual risk to property should meet the Acceptable Solutions within PBP;
- Emergency service response - the acceptability of proposed development should not be reliant on emergency service response / intervention; and
- Adjoining lands – future development should not be reliant on fuel management on adjoining lands or effect those landowners' ability to undertake such works.

A summary of the evaluation of the Master Plan against the strategic requirements is provided in **Table 13**, and a summary of Master Plan recommendations and/or future considerations for detailed design is included in **Table 14**.

Table 13 Evaluation of Master Plan against strategic requirements of PBP

PBP Strategic Planning Principle	Evaluation
Ensuring land is suitable for development in the context of bushfire risk	The bushfire risk assessment for the Master Plan area demonstrates that the residual bushfire risk context is not considered inappropriate following evaluation against the strategic principles of PBP.
Ensuring new development on BFPL will comply with PBP	New development on BFPL can meet the requirements of PBP. In addition, once activated, only a small proportion of the Master Plan Area will remain incumbered by BFPL.

PBP Strategic Planning Principle	Evaluation
Minimising reliance on performance-based solutions	The acceptable solutions of PBP by way of provision of APZ, access, infrastructure and water supply, can be accommodated for in detailed design.
Providing adequate infrastructure associated with emergency evacuation and firefighting operations	The Master Plan area is encompassed by broader regional planning mechanisms associated with the Western Sydney Aerotropolis and therefore the provision of adequate infrastructure for emergency management has been considered as a component of broader planning.
Facilitating appropriate ongoing land management practices	It is recommended that future hazards are managed under a vegetation plan and APZ management within public spaces is guided by a maintenance plan.

Table 14 - Recommendations

Ref	Recommendation	Timeframe	Responsible
Access			
1	Compliant access to be demonstrated in future submissions seeking development consent, including provision of perimeter roads adjacent to all hazards. Identification of key evacuation routes and ingress for emergency services as planning progresses to ensure these routes are prioritised in the TMAP.	Prior to relevant Planning Approval (SSDA/DA/CDC)	Applicant responsible for inclusion. Consent Authority to approve
Asset Protection Zones			
2.	Capability for compliant APZ's to be demonstrated in future submissions seeking development consent, adjacent to all hazards	Prior to relevant Planning Approval (SSDA/DA/CDC)	Applicant responsible for inclusion. Consent Authority to approve
APZ Management			
3.	Achievable management of APZ's in perpetuity to be demonstrated in future submissions seeking development consent. This is likely to include a vegetation maintenance plan for the management of open space.	Prior to relevant Planning Approval (SSDA/DA/CDC)	Applicant responsible for inclusion. Consent Authority to approve
Recommendation 27			

Ref	Recommendation	Timeframe	Responsible
4.	The outcomes of recommendation 27 are incorporated into future planning; once these have been provisioned and enacted.	Subject to Recommendation 27 being enacted	Applicant responsible for inclusion. Consent Authority to approve

8 Conclusion

In evaluating the Master Plan Application against the bushfire strategic planning requirements of PBP, the Master Plan will facilitate development that can meet these requirements and therefore the proposal is not considered to provide for future inappropriate development. Bushfire protection measures are generally achievable within the current Master Plan or can be accommodated into further design iterations as planning progresses. Key to this will be precise delineation of the hazard extent along Thompsons Creek/ Moore Gully at detailed design, and allowance for bushfire protection measures meeting the acceptable solutions of PBP in these areas, particularly the provision of compliant perimeter roads.

Reviewing the Master Plan against the relevant policies and requirements, the proposal is not considered to be inconsistent with these controls, noting that further planning will need to address the acceptable solutions of PBP in relation to bushfire protection measure requirements, including the provision of compliant APZ's and perimeter roads.

From a bushfire strategic planning perspective, and in consideration of the strategic planning principles of PBP, the landscape risk assessment and land use evaluation undertaken in this study has demonstrated that the Master Plan area is situated in a lower risk setting, and that following mitigation, the remaining residual risk is not considered inappropriate for the futured land uses proposed under the Master Plan. In addition, it is expected that as activation of the broader Precinct occurs, the residual risk will further be reduced. Therefore, the proposal is not considered to promote inappropriate development, or result in a residual risk to life or property that is unacceptable.

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NSW GOVERNMENT

APPENDIX I (a)

20230913 Contamination Report (Site Audit Report)

Site Audit Report

0503-2304

Bradfield City Centre
215 Badgerys Creek Road
Bringelly NSW

15 November 2022

60627/147,178 (Rev 0)

JBS&G Australia Pty Ltd

www.jbsg.com.au

Site Audit Report

0503-2304

Bradfield City Centre
215 Badgerys Creek Road
Bringelly NSW

15 November 2022

60627/147,178 (Rev 0)

JBS&G Australia Pty Ltd

NSW Site Auditor Scheme

Site Audit Statement

A site audit statement summarises the findings of a site audit. For full details of the site auditor's findings, evaluations and conclusions, refer to the associated site audit report.

This form was approved under the *Contaminated Land Management Act 1997* on 12 October 2017.

For information about completing this form, go to Part IV.

Part I: Site audit identification

Site audit statement no. **0503-2304**

This site audit is a:

❑ statutory audit

☑ non-statutory audit

within the meaning of the *Contaminated Land Management Act 1997*.

Site auditor details

(As accredited under the *Contaminated Land Management Act 1997*)

Name **Andrew Lau**

Company **JBS&G**

Address **Level 1, 50 Margaret Street**

Sydney **NSW** Postcode **2000**

Phone **02 8245 0300**

Email **alau@jbsg.com.au**

Site details

Address **215 Badgerys Creek Road**

Bringelly NSW Postcode **2556**

Property description

(Attach a separate list if several properties are included in the site audit.)

Part Lot 101 in DP 1282949

Local government area **Liverpool**

Area of site (include units, e.g. hectares) **94.56 hectares**

Current zoning **ENZ Environment and Recreation and MU Mixed Use**

Regulation and notification

To the best of my knowledge:

☐ ~~**the site is** the subject of a declaration, order, agreement, proposal or notice under the *Contaminated Land Management Act 1997* or the *Environmentally Hazardous Chemicals Act 1985*, as follows: (provide the no. if applicable)~~

- ☐ ~~Declaration no.~~
- ☐ ~~Order no.~~
- ☐ ~~Proposal no.~~
- ☐ ~~Notice no.~~

☑ **the site is not** the subject of a declaration, order, proposal or notice under the *Contaminated Land Management Act 1997* or the *Environmentally Hazardous Chemicals Act 1985*.

To the best of my knowledge:

☐ ~~the site **has** been notified to the EPA under section 60 of the *Contaminated Land Management Act 1997*~~

☑ the site **has not** been notified to the EPA under section 60 of the *Contaminated Land Management Act 1997*.

Site audit commissioned by

Name **Paul Hedge**

Company **Western Parkland City Authority**

Address **Level 2, 10 Valentine Avenue**

Parramatta NSW Postcode **2150**

Phone **0413 587 340**

Email **Paul.Hedge@wpca.sydney**

Contact details for contact person (if different from above)

Name **As Above**

Phone

Email

Nature of statutory requirements (not applicable for non-statutory audits)

☐ ~~Requirements under the *Contaminated Land Management Act* 1997 (e.g. management order; please specify, including date of issue)~~

☐ ~~Requirements imposed by an environmental planning instrument (please specify, including date of issue)~~

☐ ~~Development consent requirements under the *Environmental Planning and Assessment Act 1979* (please specify consent authority and date of issue)~~

☐ ~~Requirements under other legislation (please specify, including date of issue)~~

Purpose of site audit

☐ ~~**A1** To determine land use suitability~~

~~Intended uses of the land:~~

~~OR~~

☐ ~~**A2** To determine land use suitability subject to compliance with either an active or passive environmental management plan~~

~~Intended uses of the land:~~

~~OR~~

(Tick all that apply)

☑ **B1** To determine the nature and extent of contamination

☑ **B2** To determine the appropriateness of:

- ☐ ~~an investigation plan~~
- ☑ a remediation plan
- ☐ ~~a management plan~~

☐ ~~**B3** To determine the appropriateness of a **site testing plan** to determine if groundwater is safe and suitable for its intended use as required by the *Temporary Water Restrictions Order for the Botany Sands Groundwater Resource 2017*~~

☐ ~~**B4** To determine the compliance with an approved:~~

- ☐ ~~**voluntary management proposal** or~~
- ☐ ~~**management order** under the *Contaminated Land Management Act 1997*~~

☑ **B5** To determine if the land can be made suitable for a particular use (or uses) if the site is remediated or managed in accordance with a specified plan.

Intended uses of the land:

- Public open space/recreation
- Commercial/industrial
- Medium to high density residential
- Mixed use – including retail, hotel, child care facilities, community and education

Information sources for site audit

Consultancies which conducted the site investigations and/or remediation:

Environmental Resources Management Australia Pty Ltd (ERM)

Titles of reports reviewed:

- *Aerotropolis Core Precinct, Review of Contamination Issues.* 17th June 2021, Rev 3, Final (Environmental Resources Management Australia Pty Ltd, 2021b);
- *Aerotropolis Core Precinct – Commonwealth Land, Sampling and Analysis Quality Plan.* 8 July 2021, Rev 2, Final V2 (Environmental Resources Management Australia Pty Ltd, 2021c);
- *Asbestos Management Plan, Bradfield City Centre.* 8 November 2022, Rev 2, Final (Environmental Resources Management Australia Pty Ltd, 2022b); and
- *Detailed Site Investigation, Bradfield City Centre, NSW*. 10 November 2022, Rev 5, Final V2 (Environmental Resources Management Australia Pty Ltd, 2022c).

Other information reviewed, including previous site audit reports and statements relating to the site:

- *Unexploded Ordnance (UXO) Consultancy Services, RAAF Receiving Station Site Bringelly, NSW*. V1.01, 13 January 2011. G-tek Australia Pty Limited (G-tek 2011);
- *Bringelly RAAF Receiving Station, Infrastructure Assessment Report, April 2011*. Rev no. 2, 8/2/11. GHD Pty Ltd (GHD 2011);
- *RAAF Bringelly Receiving Station, NSW, Heritage Assessment*. 0121954, 18 April 2011. Environmental Resources Management Pty Ltd (ERM 2011);
- *Bringelly RAAF Receiving Station, Bringelly, NSW. Stage 1 Overarching Report – Summary Outcomes of Due Diligence Investigations*. Final Report, August 2011. Sweet (Australia) Pty Ltd (Sweett 2011);
- *Hazardous Building Materials Assessment, Former RAAF Bringelly Receiving Station*. 107623154 018 Rev 0, August 2011. Golder Associates Pty Ltd (Golder 2011a);
- *Detailed Site Investigation, Former RAAF Bringelly Receiving Station*. 107623154 021 R Rev 0, October 2011. Golder Associates Pty Ltd (Golder 2011b);
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- *215 Badgerys Creek Road, Bringelly, NSW, Detailed Site Investigation Report*. P19.114-RPT-DSI_0, 13/12/2019. Western Environmental Pty Ltd (Western Environmental 2019);
- *Sydney Metro Greater West Technical Paper 8: Contamination*. Rev 3, June 2020. M2A Pty Ltd (M2A 2020a);
- *Sydney Metro Western Sydney Airport Technical Paper: Non-Aboriginal heritage*. Draft Revision 5, July 2020. Artefact Heritage Services (Artefact Heritage 2020);
- *Sydney Metro – Western Sydney Airport, Technical paper 5: Aboriginal Heritage*. Rev 2, July 2020. M2A Pty Ltd (M2A 2020b);

- *Western Sydney Aerotropolis Constraints and Land Capability Assessment – Stage 1 Report*. September 2020. Aurecon Australasia Pty Ltd (Aurecon 2020);
- *Aerotropolis Core Precinct, Targeted Site Investigation*. Final, 21 May 2021 (Environmental Resources Management Australia Pty Ltd, 2021a);
- *Detailed Site Investigation, First Building Area Bradfield City Centre, NSW*. 10 June 2022, Rev 4, Final (Environmental Resources Management Australia Pty Ltd, 2022a); and
- *Site Audit Report 0503-2108. First Building Area Bradfield City Centre 215 Badgerys Creek Road Bringelly NS*W. Rev 0, July 2022. JBS&G 2022a.

Site audit report details

Title **Site Audit Report 0503-2304, Bradfield City Centre, 215 Badgerys Creek Road Bringelly NSW**

Report no. **60627/147,178 (Rev 0)** Date **15 November 2022**

Part II: Auditor's findings

Please complete either Section A1, Section A2 or Section B, not more than one section. (Strike out the irrelevant sections.)

- Use **Section A1** where site investigation and/or remediation has been completed and a conclusion can be drawn on the suitability of land uses **without the implementation** of an environmental management plan.
- Use **Section A2** where site investigation and/or remediation has been completed and a conclusion can be drawn on the suitability of land uses **with the implementation** of an active or passive environmental management plan.
- Use **Section B** where the audit is to determine:
  - (B1) the nature and extent of contamination, and/or
  - (B2) the appropriateness of an investigation, remediation or management plan[1], and/or
  - (B3) the appropriateness of a site testing plan in accordance with the *Temporary Water Restrictions Order for the Botany Sands Groundwater Source 2017*, and/or
  - (B4) whether the terms of the approved voluntary management proposal or management order have been complied with, and/or
  - (B5) whether the site can be made suitable for a specified land use (or uses) if the site is remediated or managed in accordance with the implementation of a specified plan.

[1] For simplicity, this statement uses the term 'plan' to refer to both plans and reports.

~~Section A1~~

~~I certify that, in my opinion:~~

~~The **site is suitable** for the following uses:~~

~~(Tick all appropriate uses and strike out those not applicable.)~~

- ☐ ~~Residential, including substantial vegetable garden and poultry~~
- ☐ ~~Residential, including substantial vegetable garden, excluding poultry~~
- ☐ ~~Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~
- ☐ ~~Day care centre, preschool, primary school~~
- ☐ ~~Residential with minimal opportunity for soil access, including units~~
- ☐ ~~Secondary school~~
- ☐ ~~Park, recreational open space, playing field~~
- ☐ ~~Commercial/industrial~~
- ☐ ~~Other (please specify):~~

_____

~~OR~~

- ☐ ~~I certify that, in my opinion, the **site is not suitable** for any use due to the risk of harm from contamination.~~

~~Overall comments:~~

_____

_____

_____

Section A2

~~I certify that, in my opinion:~~

~~Subject to compliance with the **attached** environmental management plan[2] (EMP), the site is suitable for the following uses:~~

~~(Tick all appropriate uses and strike out those not applicable.)~~

- ☐ ~~Residential, including substantial vegetable garden and poultry~~
- ☐ ~~Residential, including substantial vegetable garden, excluding poultry~~
- ☐ ~~Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~
- ☐ ~~Day care centre, preschool, primary school~~
- ☐ ~~Residential with minimal opportunity for soil access, including units~~
- ☐ ~~Secondary school~~
- ☐ ~~Park, recreational open space, playing field~~
- ☐ ~~Commercial/industrial~~
- ☐ ~~Other (please specify):~~

_____

~~EMP details~~

~~Title~~

~~Author~~

~~Date~~ ~~No. of pages~~

~~EMP summary~~

~~This EMP (attached) is required to be implemented to address residual contamination on the site.~~

~~The EMP: (Tick appropriate box and strike out the other option.)~~

- ☐ ~~requires operation and/or maintenance of **active** control systems[3]~~
- ☐ ~~requires maintenance of **passive** control systems only[3].~~

[2] Refer to Part IV for an explanation of an environmental management plan.
[3] Refer to Part IV for definitions of active and passive control systems.

~~Purpose of the EMP:~~

~~Description of the nature of the residual contamination:~~

~~Summary of the actions required by the EMP:~~

~~How the EMP can reasonably be made to be legally enforceable:~~

~~How there will be appropriate public notification:~~

~~Overall comments:~~

~~Section B~~

Purpose of the plan[4] which is the subject of this audit:

Document site conditions in relation to previously detected and potential ACM impacts, and provide measures for the safe management of potential ACM that may be encountered during development works and remediation/validation of site areas as required.

I certify that, in my opinion:

(B1)

☑ The nature and extent of the contamination **has** been appropriately determined

~~☐ The nature and extent of the contamination **has not** been appropriately determined~~

AND/OR (B2)

☑ The investigation, remediation or management plan **is** appropriate for the purpose stated above

~~☐ The investigation, remediation or management plan **is not** appropriate for the purpose stated above~~

~~AND/OR (B3)~~

~~☐ The site testing plan:~~

~~☐ **is** appropriate to determine~~

~~☐ **is not** appropriate to determine~~

~~if groundwater is safe and suitable for its intended use as required by the *Temporary Water Restrictions Order for the Botany Sands Groundwater Resource 2017*~~

~~AND/OR (B4)~~

~~☐ The terms of the approved voluntary management proposal* or management order** (strike out as appropriate):~~

~~☐ **have** been complied with~~

~~☐ **have not** been complied with.~~

~~*voluntary management proposal no.~~

~~**management order no.~~

AND/OR (B5)

☑ The site **can be made suitable** for the following uses:

(Tick all appropriate uses and strike out those not applicable.)

~~☐ Residential, including substantial vegetable garden and poultry~~

~~☐ Residential, including substantial vegetable garden, excluding poultry~~

[4] For simplicity, this statement uses the term 'plan' to refer to both plans and reports.

- ~~☐ Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~
- ☑ Day care centre, preschool, primary school
- ☑ Residential with minimal opportunity for soil access, including units
- ☑ Secondary school
- ☑ Park, recreational open space, playing field
- ☑ Commercial/industrial
- ☑ Other (please specify):
  - retail
  - hotel
  - child care facilities
  - community

IF the site is ~~remediated~~/managed* in accordance with the following plan (**attached**):

*Strike out as appropriate

Plan title	**Asbestos Management Plan**		
Plan author	**Environmental Resources Management Australia Pty Ltd**		
Plan date	**8 November 2022**	No. of pages	**35**

SUBJECT to compliance with the following condition(s):

-

Overall comments:

- The site investigation works (ERM 2021b and ERM 2022c) are considered to have met the requirements of the *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd Edition)* (EPA 2017).
- The soil investigations identified elevated concentrations of heavy metals above the adopted EILs in shallow fill or natural material which are considered representative of natural background conditions and unlikely to pose risks for current or future land uses. Similarly, concentrations of heavy metals exceeding the adopted site criteria detected in groundwater and surface water samples are not considered to be indicative of anthropogenic impacts and do not require further assessment.
- Assessment of groundwater conditions did not identify levels of the identified contaminants of potential concern in groundwater which are considered to require remediation or management under the proposed uses.
- Assessment of surface water and sediment conditions did not identify levels of the identified contaminants of potential concern which are considered to require management under the proposed uses.

- While ACM was not identified at the site during the recent site investigations (ERM 2021b and 2022c), there is potential for asbestos impact to exist in fill materials (particularly around the former Married Quarters) and in on-site service pits/conduits. Implementation of an AMP is required during development of the site to manage any unexpected finds.

- Consideration of aesthetic issues including staining, odours, anthropogenic contaminants and presence of asbestos has been adequately addressed in the assessment of soils at the site.

- The AMP (ERM 2022b) prepared for the site addresses the identified contamination issue; with the site management approach documented in the AMP checked by the auditor and found to be: technically feasible; environmentally justifiable given the nature and extent of the identified potential contamination; and consistent with relevant laws, policies and guidelines.

- The auditor notes that the site management and validation procedures outlined in the AMP (ERM 2022b) are considered appropriate to make the site suitable for the proposed Public open space/recreation and mixed uses including medium to high density residential, commercial/industrial, retail, hotel, child care facilities, community and education, subject to the following requirements:
    - Any amendments to the AMP that result in changes to site management will be required to be reviewed and endorsed by the site auditor prior to implementation.
    - Appropriate supervision by an Environmental Consultant and / or Occupational Hygienist during any asbestos management works.
    - A validation report is prepared in accordance with relevant EPA requirements confirming the suitability of the site for the intended landuses prior to occupation of the site.

Part III: Auditor's declaration

I am accredited as a site auditor by the NSW Environment Protection Authority (EPA) under the *Contaminated Land Management Act 1997.*

Accreditation no. **0503**

I certify that:

- I have completed the site audit free of any conflicts of interest as defined in the *Contaminated Land Management Act 1997,* and
- with due regard to relevant laws and guidelines, I have examined and am familiar with the reports and information referred to in Part I of this site audit, and
- on the basis of inquiries I have made of those individuals immediately responsible for making those reports and obtaining the information referred to in this statement, those reports and that information are, to the best of my knowledge, true, accurate and complete, and
- this statement is, to the best of my knowledge, true, accurate and complete.

I am aware that there are penalties under the *Contaminated Land Management Act 1997* for wilfully making false or misleading statements.

Signed

Date 15 November 2022

Part IV: Explanatory notes

To be complete, a site audit statement form must be issued with all four parts.

How to complete this form

Part I

Part I identifies the auditor, the site, the purpose of the audit and the information used by the auditor in making the site audit findings.

Part II

Part II contains the auditor's opinion of the suitability of the site for specified uses or of the appropriateness of an investigation, or remediation plan or management plan which may enable a particular use. It sets out succinct and definitive information to assist decision-making about the use or uses of the site or a plan or proposal to manage or remediate the site.

The auditor is to complete either Section A1 or Section A2 or Section B of Part II, **not** more than one section.

Section A1

In Section A1 the auditor may conclude that the land is *suitable* for a specified use or uses OR *not suitable* for any beneficial use due to the risk of harm from contamination.

By certifying that the site is *suitable*, an auditor declares that, at the time of completion of the site audit, no further investigation or remediation or management of the site was needed to render the site fit for the specified use(s). **Conditions must not be** imposed on a Section A1 site audit statement. Auditors may include **comments** which are key observations in light of the audit which are not directly related to the suitability of the site for the use(s). These observations may cover aspects relating to the broader environmental context to aid decision-making in relation to the site.

Section A2

In Section A2 the auditor may conclude that the land is *suitable* for a specified use(s) subject to a condition for implementation of an environmental management plan (EMP).

Environmental management plan

Within the context of contaminated sites management, an EMP (sometimes also called a 'site management plan') means a plan which addresses the integration of environmental mitigation and monitoring measures for soil, groundwater and/or hazardous ground gases throughout an existing or proposed land use. An EMP succinctly describes the nature and location of contamination remaining on site and states what the objectives of the plan are, how contaminants will be managed, who will be responsible for the plan's implementation and over what time frame actions specified in the plan will take place.

By certifying that the site is suitable subject to implementation of an EMP, an auditor declares that, at the time of completion of the site audit, there was sufficient information satisfying guidelines made or approved under the *Contaminated Land Management Act 1997*

(CLM Act) to determine that implementation of the EMP was feasible and would enable the specified use(s) of the site and no further investigation or remediation of the site was needed to render the site fit for the specified use(s).

Implementation of an EMP is required to ensure the site remains suitable for the specified use(s). The plan should be legally enforceable: for example, a requirement of a notice under the CLM Act or a development consent condition issued by a planning authority. There should also be appropriate public notification of the plan, e.g. on a certificate issued under s.149 of *the Environmental Planning and Assessment Act 1979*.

Active or passive control systems

Auditors must specify whether the EMP requires operation and/or maintenance of active control systems or requires maintenance of passive control systems only. Active management systems usually incorporate mechanical components and/or require monitoring and, because of this, regular maintenance and inspection are necessary. Most active management systems are applied at sites where if the systems are not implemented an unacceptable risk may occur. Passive management systems usually require minimal management and maintenance and do not usually incorporate mechanical components.

Auditor's comments

Auditors may also include **comments** which are key observations in light of the audit which are not directly related to the suitability of the site for the use(s). These observations may cover aspects relating to the broader environmental context to aid decision-making in relation to the site.

Section B

In Section B the auditor draws conclusions on the nature and extent of contamination, and/or suitability of plans relating to the investigation, remediation or management of the land, and/or the appropriateness of a site testing plan in accordance with the *Temporary Water Restrictions Order for the Botany Sands Groundwater Source 2017*, and/or whether the terms of an approved voluntary management proposal or management order made under the CLM Act have been complied with, and/or whether the site can be made suitable for a specified land use or uses if the site is remediated or managed in accordance with the implementation of a specified plan.

By certifying that a site *can be made suitable* for a use or uses if remediated or managed in accordance with a specified plan, the auditor declares that, at the time the audit was completed, there was sufficient information satisfying guidelines made or approved under the CLM Act to determine that implementation of the plan was feasible and would enable the specified use(s) of the site in the future.

For a site that *can be made suitable*, any **conditions** specified by the auditor in Section B should be limited to minor modifications or additions to the specified plan. However, if the auditor considers that further audits of the site (e.g. to validate remediation) are required, the auditor must note this as a condition in the site audit statement. The condition must not specify an individual auditor, only that further audits are required.

Auditors may also include **comments** which are observations in light of the audit which provide a more complete understanding of the environmental context to aid decision-making in relation to the site.

Part III

In **Part III** the auditor certifies their standing as an accredited auditor under the CLM Act and makes other relevant declarations.

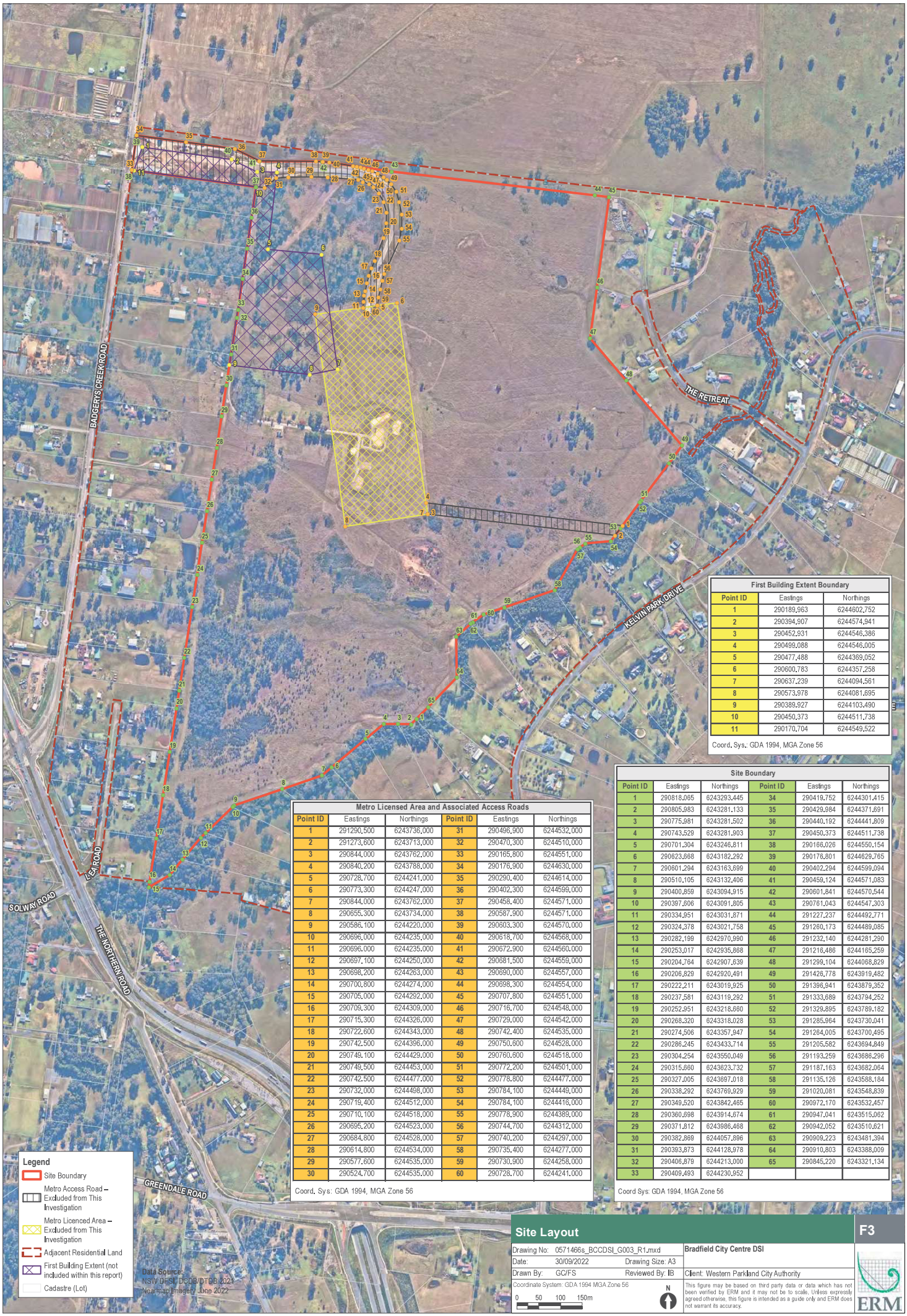
Where to send completed forms

In addition to furnishing a copy of the audit statement to the person(s) who commissioned the site audit, statutory site audit statements must be sent to

- the **NSW Environment Protection Authority**: nswauditors@epa.nsw.gov.au or as specified by the EPA

AND

- the **local council** for the land which is the subject of the audit.



First Building Extent Boundary

Point ID	Eastings	Northings
1	290189.963	6244602.752
2	290394.907	6244574.941
3	290452.931	6244546.386
4	290499.088	6244546.005
5	290477.488	6244369.052
6	290600.783	6244357.258
7	290637.239	6244094.561
8	290573.978	6244081.695
9	290389.927	6244103.490
10	290450.373	6244511.738
11	290170.704	6244549.522

Coord. Sys.: GDA 1994, MGA Zone 56

Metro Licensed Area and Associated Access Roads

Point ID	Eastings	Northings	Point ID	Eastings	Northings
1	291290.500	6243736.000	31	290496.900	6244532.000
2	291273.600	6243713.000	32	290470.300	6244510.000
3	290844.000	6243762.000	33	290165.800	6244551.000
4	290840.200	6243788.000	34	290176.900	6244630.000
5	290728.700	6244241.000	35	290290.400	6244614.000
6	290773.300	6244247.000	36	290402.300	6244599.000
7	290844.000	6243762.000	37	290458.400	6244571.000
8	290655.300	6243734.000	38	290587.900	6244571.000
9	290586.100	6244220.000	39	290603.300	6244570.000
10	290696.000	6244235.000	40	290618.700	6244568.000
11	290696.000	6244235.000	41	290672.900	6244560.000
12	290697.100	6244250.000	42	290681.500	6244559.000
13	290698.200	6244263.000	43	290690.000	6244557.000
14	290700.800	6244274.000	44	290698.300	6244554.000
15	290705.000	6244292.000	45	290707.800	6244551.000
16	290709.300	6244309.000	46	290716.700	6244548.000
17	290715.300	6244326.000	47	290729.000	6244542.000
18	290722.600	6244343.000	48	290742.400	6244535.000
19	290742.500	6244396.000	49	290750.600	6244528.000
20	290749.100	6244429.000	50	290760.600	6244518.000
21	290749.500	6244453.000	51	290772.200	6244501.000
22	290742.500	6244477.000	52	290778.800	6244477.000
23	290732.000	6244498.000	53	290784.100	6244449.000
24	290719.400	6244512.000	54	290784.100	6244416.000
25	290710.100	6244518.000	55	290778.900	6244389.000
26	290695.200	6244523.000	56	290744.700	6244312.000
27	290684.800	6244528.000	57	290740.200	6244297.000
28	290614.800	6244534.000	58	290735.400	6244277.000
29	290577.600	6244535.000	59	290730.900	6244258.000
30	290524.700	6244535.000	60	290728.700	6244241.000

Coord. Sys: GDA 1994, MGA Zone 56

Site Boundary

Point ID	Eastings	Northings	Point ID	Eastings	Northings
1	290818.065	6243293.445	34	290419.752	6244301.415
2	290805.983	6243281.133	35	290429.984	6244371.691
3	290775.981	6243281.502	36	290440.192	6244441.809
4	290743.529	6243281.903	37	290450.373	6244511.738
5	290701.304	6243246.811	38	290166.026	6244550.154
6	290623.668	6243182.292	39	290176.801	6244629.765
7	290601.294	6243163.699	40	290402.294	6244599.094
8	290510.105	6243132.406	41	290459.124	6244571.083
9	290400.859	6243094.915	42	290601.841	6244570.544
10	290397.606	6243091.805	43	290761.043	6244547.303
11	290334.951	6243031.871	44	291227.237	6244492.771
12	290324.378	6243021.758	45	291260.173	6244489.085
13	290282.199	6242970.990	46	291232.140	6244281.290
14	290253.017	6242935.868	47	291216.486	6244165.259
15	290204.764	6242907.639	48	291299.104	6244068.829
16	290206.829	6242920.491	49	291426.778	6243919.482
17	290222.211	6243019.925	50	291396.941	6243879.352
18	290237.581	6243119.292	51	291333.689	6243794.252
19	290252.951	6243218.660	52	291329.895	6243789.182
20	290268.320	6243318.028	53	291285.964	6243730.041
21	290274.506	6243357.947	54	291264.005	6243700.495
22	290286.245	6243433.714	55	291205.582	6243694.849
23	290304.254	6243550.049	56	291193.259	6243686.296
24	290315.660	6243623.732	57	291187.163	6243682.064
25	290327.005	6243697.018	58	291135.126	6243588.184
26	290338.292	6243769.929	59	291020.081	6243548.839
27	290349.520	6243842.465	60	290972.170	6243532.457
28	290360.698	6243914.674	61	290947.041	6243515.062
29	290371.812	6243986.468	62	290942.052	6243510.621
30	290382.869	6244057.896	63	290909.223	6243481.394
31	290393.873	6244128.978	64	290910.803	6243388.009
32	290406.879	6244213.000	65	290845.220	6243321.134
33	290409.493	6244230.952			

Coord Sys: GDA 1994, MGA Zone 56

Site Layout

F3

Drawing No: 0571466s_BCCDSI_G003_R1.mxd
Date: 30/09/2022 Drawing Size: A3
Drawn By: GC/FS Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 50 100 150m
N

Bradfield City Centre DSI

Client: Western Parkland City Authority

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM

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Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AF	Asbestos Fines
AHD	Australian Height Datum
AMP	Asbestos Management Plan
ASS	Acid Sulfate Soils
bgs	Below ground surface
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
btoc	Below top of casing
CHL	Commonwealth Heritage List
CLM	Contaminated Land Management
CoPCs	Contaminants of Potential Concern
CSM	Conceptual Site Model
DO	Dissolved oxygen
DP&E	NSW Department of Planning and Environment
DP	Deposited Plan
DQO	Data Quality Objectives
DSI	Detailed Site Investigation
EC	Electrical conductivity
Eh	Redox potential
EIL	Ecological Investigation Level
EPA	New South Wales Environment Protection Authority
ESL	Ecological Screening Level
FA	Fibrous asbestos
HIL	Health Based Investigation Level
HSL	Health Screening Level
LOR	Limit of Reporting
MAH	Monocyclic Aromatic Hydrocarbon
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
OCP	Organochlorine Pesticide
OPP	Organophosphorus Pesticide
OTC	Overseas Telecommunications Company
PAH	Polycyclic Aromatic Hydrocarbons
PARCC	Precision, accuracy, representativeness, comparability and completeness
PCB	Polychlorinated Biphenyls
PFAS	Poly-fluoroalkyl substances
PFHxS	Poly-fluorohexane sulfonate
PFOA	Poly-fluoro-octanoic acid
PFOS	Poly-fluorooctane sulfonate
PSI	Preliminary Site Investigation
RAP	Remedial Action Plan
QA/QC	Quality Assurance/Quality Control
RAAF	Royal Australian Air Force
RAP	Remedial Action Plan
RPD	Relative Percentage Difference
SAR	Site Audit Report
SAS	Site Audit Statement
SHR	State Heritage Register
SMF	Synthetic Mineral Fibre
SVOC	Semi-volatile organic compound
TRH	Total Recoverable Hydrocarbons
UXO	Unexploded Ordnance
VOC	Volatile organic compound
WPCA	Western Parkland City Authority

1. Introduction

1.1 Introduction and Background

Andrew Lau ('the auditor') of JBS&G Australia Pty Ltd (JBS&G) has been engaged by Western Parkland City Authority (WPCA, the client) to conduct a site audit for the portion of the property located at 215 Badgerys Creek Road Bringelly NSW identified as Bradfield City Centre within the Aerotropolis Core Precinct of the Western Parkland City ('the site'). The site is legally identified as part Lot 101 in Deposited Plan (DP) 1282949 occupying an area of approximately 94.56 hectares (**Appendix C**).

The site comprises the majority of the Commonwealth land that was historically used as the Royal Australian Air Force (RAAF) Bringelly Radio Receiving Station radar installation until 2005. Prior to acquisition of the land by the Commonwealth Government in 1957, the site and surrounding lands were used for agricultural purposes. This audit relates to the proposed redevelopment of the site for uses including public open space/recreational, commercial/industrial, medium and high density residential, educational, community, retail, hotel and childcare within the Aerotropolis Core Precinct. The north west portion of the Commonwealth land comprising the First Building Area and a central portion of the Commonwealth land which comprises the Aerotropolis Core Metro station site and associated access roads, are excluded from the site area subject to this audit. The site area is defined in the site plans provided in **Appendix C.**

A non-statutory site audit has been completed for the First Building Area, and a Site Audit Statement (SAS) and associated Site Audit Report (SAR) was issued in July 2022 (Audit #0503-2108) (JBS&G 2022a)[1]. Conclusions drawn by the auditor, as part of the aforementioned SAS and SAR, stated that the First Building Area was suitable for the proposed land uses including commercial/industrial, residential with minimal access to soil, childcare facilities and open space.

For the purposes of ensuring that this SAR is a self-contained document, relevant background information presented in the aforementioned previous audit has been included in the relevant sections of the SAR.

Andrew Lau is a site auditor accredited by the NSW Environment Protection Authority (EPA) under the *Contaminated Land Management Act 1997* (CLM Act 1997) (Accreditation Number 0503). The audit was completed with the assistance of Christine Louie, a JBS&G senior consultant trained and experienced in contaminated land assessment and auditing.

1.2 Objectives of the Site Audit

The objectives of this site audit were to:

- undertake a literature review of background reports for the site;
- independently review a Preliminary Site Investigation (ERM 2021b);
- independently review a Detailed Site Investigation (ERM 2022a);
- independently review an Asbestos Management Plan (ERM 2022b); and
- prepare a SAR and issue a SAS, providing an opinion that the site is suitable can be made suitable for the proposed land uses including commercial/industrial, medium and high density residential, educational, community, retail, hotel and childcare, subject to implementation of the Asbestos Management Plan (AMP).

[1] *Site Audit Report 0503-2108. First Building Area Bradfield City Centre, 215 Badgerys Creek Road Bringelly NSW*. Rev 0, 11 July 2022. JBS&G (2022a).

In accordance with the requirements of the CLM Act 1997, the site audit was undertaken with consideration to:

- the provisions of the CLM Act 1997, Regulations and subsequent amendments;
- the provisions of environmental planning instruments applying to the site;
- relevant guidelines made or approved by the EPA (**Appendix A**).

1.3 Type of Audit

Since the site audit is not being undertaken in response to a legal requirement imposed by a consent authority or the EPA, the site audit has been conducted as a non-statutory audit.

1.4 Documents Reviewed

The following documentation was reviewed as part of the site audit:

- *Aerotropolis Core Precinct, Review of Contamination Issues.* 17th June 2021, Rev 3, Final (Environmental Resources Management Australia Pty Ltd, 2021b);
- *Aerotropolis Core Precinct – Commonwealth Land, Sampling and Analysis Quality Plan*. 8 July 2021, Rev 2, Final V2 *(*Environmental Resources Management Australia Pty Ltd, 2021c);
- *Asbestos Management Plan, Bradfield City Centre.* 8 November 2022, Rev 2, Final (Environmental Resources Management Australia Pty Ltd, 2022b); and
- *Detailed Site Investigation, Bradfield City Centre, NSW.* 10 November 2022, Rev 5, Final V2 (Environmental Resources Management Australia Pty Ltd, 2022c).

The following additional documents were also considered during the site audit:

- *Unexploded Ordnance (UXO) Consultancy Services, RAAF Receiving Station Site Bringelly*, NSW. V1.01, 13 January 2011. G-tek Australia Pty Limited (G-tek 2011);
- *Bringelly RAAF Receiving Station, Infrastructure Assessment Report, April 2011.* Rev no. 2, 8/2/11. GHD Pty Ltd (GHD 2011);
- *RAAF Bringelly Receiving Station, NSW, Heritage Assessment.* 0121954, 18 April 2011. Environmental Resources Management Pty Ltd (ERM 2011);
- *Bringelly RAAF Receiving Station, Bringelly, NSW. Stage 1 Overarching Report – Summary Outcomes of Due Diligence Investigations.* Final Report, August 2011. Sweet (Australia) Pty Ltd (Sweett 2011);
- *Hazardous Building Materials Assessment, Former RAAF Bringelly Receiving Station.* 107623154 018 Rev 0, August 2011. Golder Associates Pty Ltd (Golder 2011a);
- *Detailed Site Investigation, Former RAAF Bringelly Receiving Station.* 107623154 021 R Rev 0, October 2011. Golder Associates Pty Ltd (Golder 2011b);
- *Remedial Action Plan, Former RAAF Bringelly Receiving Station.* 117623154-036-R-Rev3, April 2014. Golder Associates Pty Ltd (Golder 2014);
- *215 Badgerys Creek Road, Bringelly, NSW, Detailed Site Investigation Report.* P19.114-RPT-DSI_0, 13/12/2019. Western Environmental Pty Ltd (Western Environmental 2019);
- *Sydney Metro Greater West Technical Paper 8: Contamination.* Rev 3, June 2020. M2A Pty Ltd (M2A 2020a);
- *Sydney Metro Western Sydney Airport Technical Paper: Non-Aboriginal heritage*. Draft Revision 5, July 2020. Artefact Heritage Services (Artefact Heritage 2020);

- *Sydney Metro – Western Sydney Airport, Technical paper 5: Aboriginal Heritage*. Rev 2, July 2020. M2A Pty Ltd (M2A 2020b);
- *Western Sydney Aerotropolis Constraints and Land Capability Assessment – Stage 1 Report.* September 2020. Aurecon Australasia Pty Ltd (Aurecon 2020);
- *Aerotropolis Core Precinct, Targeted Site Investigation.* Final, 21 May 2021 (Environmental Resources Management Australia Pty Ltd, 2021a); and
- *Detailed Site Investigation, First Building Area Bradfield City Centre, NSW.* 10 June 2022, Rev 4, Final (Environmental Resources Management Australia Pty Ltd, 2022a).

Additional correspondence relating to the site audit is provided in **Appendix B**.

1.5 Site Inspections

The site was inspected on the date shown in **Table 1.1** below.

Table 1.1: Summary of Audit Inspections

Date	Attendance	Purpose
11 May 2021	Christine Louie (JBS&G, site auditor assistant)	Site inspection to observe site layout and condition.

1.6 Chronology of Site Assessment and Audit Works

The process of the assessment and audit works undertaken at the site has been listed chronologically in **Table 1.2**.

Table 1.2: Summary of Site Assessment and Audit Works

Date	Purpose
2011 to 2015	Investigation of former RAAF site including UXO, heritage, hazardous materials and detailed site investigations completed by various consultants.
2019 to 2020	Detailed site investigations of former RAAF site, Sydney Metro Greater West and Western Sydney Aerotropolis sites.
March 2021	Commencement of site audit (0503-2304).
June 2021	Preliminary Site Investigation (ERM 2021b) completed for Stage 1 of the Aerotropolis Core Precinct as part of master planning.
July 2021	Preparation of Sampling, Analysis and Quality Plan (SAQP) (ERM 2021c) for detailed investigation of Commonwealth land portion of the Aerotropolis Core Precinct.
October 2021 to December 2021	Soil assessment investigations undertaken by ERM. Works comprised installation of 238 test pits and 42 soil bores across the site.
June 2022	Groundwater investigations including installation of 11 groundwater monitoring wells across the site and sampling of groundwater. Sampling of sediment and surface water from 10 and nine drainage line/overland flow path locations respectively. Installation of soil bores at locations where soil samples collected from testpits had not been analysed.
November 2022	Detailed Site Investigation report for Commonwealth Land completed by ERM (2022c). Asbestos Management Plan prepared by ERM (2022b). Preparation of a site audit statement (0503-2304) and accompanying site audit report (JBS&G 2022b) confirming that the Commonwealth Land area (part Lot 101 in DP 1282949 excluding Aerotropolis Core Metro Station and associated access roads) can be made suitable for public open space/recreation and mixed uses including commercial/industrial, medium to high density residential, childcare facilities, community and education land uses subject to implementation of the AMP.

2. Site Description

2.1 Site Identification

The site details have been summarised in **Table 2.1** and described in further detail in the following sections. A plan identifying the subject site has been presented in **Appendix C**.

Table 2.1: Summary Site Details

Street Address	215 Badgerys Creek Road, Bringelly NSW
Property Description	Part Lot 101 in DP 1282949
Parish	Bringelly
County	Cumberland
Local Government Area	Liverpool
Property Size	Approximately 94.56 hectares
Zoning	MU Mixed Use ENZ Environment and Recreation *State Environmental Planning Policy (Precincts - Western Parkland City) 2021*
Previous Use	Agricultural purposes High frequency radio receiving station (former RAAF Bringelly Receiving Station)
Current Use	Vacant
Proposed Use	Public open space/recreation and mixed use including commercial/industrial, medium and high density residential, educational, community and childcare facilities

2.2 Site Condition

The consultant (ERM 2022c) reported that the site was comprised of open grass areas adjacent to roadways and thick shrubs/vegetation with much of the vegetation cleared prior to sampling works. Unsealed access roads (comprised of exposed clay or topsoil with grass cover) exist in the north-western portion of the site with a road running east-west through the centre of the site ending just south of the former compound building. The unsealed access road through the centre of the property is excluded from the area subject to this site audit.

The buildings associated with the radio receiving station were demolished in February/March 2022 and were located within the central compound of the Commonwealth land which forms part of the Aerotropolis Core Metro station site area.

A small demountable building with concrete parking area was constructed across the road from the former married quarters area in March 2022. DGB material was imported as subgrade underneath the concrete slab.

2.3 Topography

The consultant (ERM 2022c) reported that the site generally slopes towards the east from approximately 78 m Australian Height Datum (AHD) on the western boundary to approximately 60 m AHD in the east.

The topography of the surrounding area is variable with gentle/undulating slopes generally in a south easterly direction.

2.4 Soils and Geology

Based on the Geological Survey of NSW 1:100,000 Penrith Geological Series Sheet (9030), the site is reported (ERM 2022c) to be underlain by Bringelly Shale comprising shale, carbonaceous claystone, claystone, laminite, fine to medium-grained lithic sandstone, with rare coal and tuff from the Middle Triassic age.

The soil landscape is described as ridge and valley country of gently undulating ridge tops and steep side slopes often with slumping and rounded hilly to steep hilly areas and relatively low valleys. Soils are hard acidic red soils (with yellow mottled soils and ironstone gravels in places). The Soil

Conservation Service of NSW 1:100,000 Penrith Soil Landscape Series Sheet (9030) describes soils on the western portion of the former RAAF Bringelly site (Golder 2011b) to be of the Blacktown soil landscape group which are shallow to moderately deep (> 100 centimetres), and may comprise of red and brown podzolic soils on crests grading to yellow podzolic soils on lower slopes and drainage lines.

2.5 Acid Sulphate Soils

Acid Sulfate Soil (ASS) is reported (ERM 2022c) in the Atlas of Australian Acid Sulfate Soils as having an extremely low probability of occurrence with 1 to 5% chance of occurrence in small localised areas.

2.6 Hydrology

The consultant (ERM 2022c) reported that the nearest surface water body is Moore Gully which crosses the western boundary of the site and enters Thompsons Creek at the eastern boundary. Five unnamed ephemeral drainage lines are mapped as flowing through the site into Thompsons Creek to the south and east.

Thompsons Creek is a tributary of South Creek with the confluence between the two creeks occurring approximately 1.3 kilometres north east of the site.

2.7 Hydrogeology

The consultant (ERM 2022c) reported that five groundwater bores located within the site boundary are registered for monitoring purposes. A search of registered groundwater bores within a 2 kilometre buffer from the site identified eight registered groundwater bores. Two bores were reported to be drilled for domestic/stock purposes; three bores were reported to be drilled for monitoring purposes; one bore was reported to be drilled for domestic/industrial/stock purposes; and one other bore was reported to be drilled for domestic purposes.

The consultant (ERM 2022c) reported that previous investigations undertaken within the site in 2021 had identified groundwater at variable depths ranging from approximately 2.5 metres below ground level (m bgl) to 13 m bgl within underlying fractures shale bedrock (Bringelly Shale).

Aquifers on-site and within the buffer area are described as porous and extensive with low to moderate productivity. The consultant (ERM 2022c) noted that groundwater within marine derived Bringelly Shale is often saline and may be unsuitable for beneficial uses.

2.8 Climate

Based on data for the Bureau of Meteorology station at Badgerys Creek airport site (station 067108), climatic conditions are reported (M2A 2020a) to be moderate with a warm summer and cool to cold winter. Rainfall is reliable throughout the year. The South Creek Catchment in which the Aerotropolis is located is considered to be one of the hottest and driest areas of the Greater Sydney Metropolitan Region (Aurecon 2020).

Maximum temperatures at Badgerys Creek generally occur between December and February. Average summer maximum temperatures range between 28.5 °C and 30.3°C. Minimum temperatures occur between June and August. Average winter minimum temperatures range between 4.1°C and 5.6°C (Western Environmental 2019).

The average annual rainfall in Bringelly is 671.6 millimetres with maximum rainfall occurring in February and March. Average monthly rainfall during these months is between 83.1 and 95.3 millimetres. Minimum rainfall occurs in July and August with average monthly rainfall during these months of between 22.6 and 35.4 millimetres.

2.9 Surrounding Environment

The consultant (ERM 2022c) reported that the site is surrounded by the following:

- North – agricultural land followed by low density/semi-rural residences (approximately 290 m to the north). The portion of the Commonwealth land identified as the Priority Area 1 (First Building) is located to the north west.
- East – Thompsons Creek runs along the majority of the eastern border of the site. Residential properties are located approximately 150 m to the east and beyond.
- South – a strip of vegetation followed by Thompsons Creek are located directly to the south. Rural residential properties are located further to the south.
- West – residential properties and Badgerys Creek Road.

2.10 Audit Opinion

The information provided by the consultant (ERM 2022c) and in supporting background reports (Golder 2011b, Western Environmental 2019 and M2A 2020a) in regard to the site condition and surrounding environment has been checked against and generally meet the requirements of EPA (2020a). The information provided was also consistent with the observations made during the audit site inspection and subsequent review of aerial imagery on Nearmap. Where material has been imported to the site and placed as subgrade prior to construction of a concrete slab for carparking, certification of compliance with a Recovered Aggregate Order was provided. Site identification and site area details have been confirmed by the auditor with relevant site plans provided in **Appendix C**.

Overall, the information provided by the consultant (ERM 2022c), supplemented by observations made during the site audit inspection and of Nearmap imagery in relation to the site condition and the surrounding environment, is considered adequate for the purposes of the site audit.

3. Site History

3.1 Site History Information Sources

A detailed review of available historical information available for the Commonwealth land was undertaken by the consultants (Golder 2011b and ERM 2021b). Historical information relating to the site was sourced from aerial photographs, maps, historical title search, NSW EPA Records, council records and publicly available site information databases.

The consultant undertook a review of previous site investigation reports for the Commonwealth land as part of the preliminary site investigation (ERM 2021b).

A summary of historical information relevant to the site has been provided in the following sections.

3.2 Aerial Photographs

The consultants (ERM 2010, Golder 2011b, Aurecon 2020 and ERM 2021b) undertook a review of historical aerial photographs and maps for the Commonwealth land and surrounding area with the following information provided:

<u>1947</u>

- The Commonwealth land was generally cleared with a number of drainage lines running from west to east.
- The surrounding area was generally cleared for agricultural and primary production land use. Kelvin Park homestead was visible to the north east.

<u>1949</u>

- The Commonwealth land comprised of vacant land. The land was moderately vegetated in the western portion and more scarcely vegetated across the remainder.
- The adjacent residential lands were occupied by private residences. Land directly to the west is densely vegetated with sparse vegetation in surrounding areas. Thompsons Creek was identified along the eastern boundary with dense vegetation surrounding the creek.

<u>1955</u>

- A residential property had been constructed in the north western adjacent residential land. An agricultural residence had been constructed approximately 20 metres to the north of the Commonwealth land.

<u>1961</u>

- Structures present on the RAAF Bringelly site include structures within the compound, former Married Quarters and the facilities assumed to be the Barracks and tennis court located south of the compound. The tower to the west of the compound, three structures at the location of the fire tank and fire pump house, and a small structure to the south were also observed. A dam was observed in the north eastern corner of the site on the drainage line.
- The Overseas Telecommunications Company (OTC) Receiving Station site had been established to the north. A number of cottages were located adjacent to the north western boundary of the Commonwealth land.

<u>1965</u>

- A large pond was present approximately 350 metres south west of the Commonwealth land. Additional residential properties had been constructed approximately 20 metres to the west.

1970

- The building compound appeared to include the administration building, flammables store, sheds and tower. An additional building had been constructed, extending the Married Quarters. The dam on the western boundary had been constructed. Chicken sheds were observed north of the OTC site. The number of small holdings along Bringelly Road and Northern Road had increased.

1978

- Additional structures were observed in the Married Quarters area. Masts and guy wire footings were visible in the north eastern section of the site. No other changes were observed in the surrounding area.

1986

- Two large fenced areas, corresponding to areas where antennae footings were observed, were present on the northern and eastern portions of the Commonwealth land. Three buildings on the western side had been demolished. Five new poultry farms had been built in the surrounding area.

1994

- No changes were observed on the Commonwealth land.
- Residential subdivision of the area east of Thompsons Creek had commenced. Kelvin Park Drive, Medich Place and some structures were visible.

2005

- The Married Quarters and area assumed to be the Barracks of the former RAAF Bringelly site had been demolished. The cottages on the OTC site had been demolished. The area east of Thompsons Creek had further residential development.

2020

- Additional residential and industrial development of the general local area.

3.3 Historical Title Search

The consultant (Golder 2011b) summarised the search of the historical land title database for the land occupied by the former Commonwealth land site which originally formed part of Portion 21 and Portion 22 of the Parish of Bringelly.

Review of title information indicated the following ownership:

- 1818 to 1957 – various owners with probable use of the land identified as grazing purposes.
- 1957 to date – Commonwealth of Australia for use as RAAF Bringelly Receiving Station.

The consultant (ERM 2022c) reported that the Commonwealth land site was acquired from the Commonwealth Government by WPCA for development of the Bradfield City Centre on behalf of the NSW Government.

3.4 Anecdotal Information

The consultant (Western Environmental 2019) reported that anecdotal information identified a former emergency runway was located within the former RAAF Bringelly site in the 1940s/1950s.

A civil aviation crash was reported to have occurred at the site in 2017. The exact location is not known.

3.5 Regulatory Searches

Council Records

The consultant (M2A 2020b) provided a planning certificate (section 10.7) for 215 Badgerys Creek Road (formerly Lot 10 DP 1235662) issued by Liverpool City Council under Section 10.7 (2) of the *Environmental Planning and Assessment Act 1979* for the former RAAF Bringelly site.

The section 10.7 certificate indicated the following for the former RAAF Bringelly site:

- the site does not include or comprise critical habitat;
- the site in not located in a Conservation Area;
- there are items of Environmental Heritage on the site;
- the site is not located within a proclaimed mine subsidence district;
- the site is not affected by road widening or road realignment;
- the site is affected by a Council policy restricting development due to likelihood of bushfire, potentially contaminated land and potentially saline soils apply;
- the site is not affected by a Council policy restricting development due to likelihood of landslip, tidal inundation, subsidence or acid sulphate soils;
- the site is identified as being flood prone and is subject to flood planning controls;
- part of the site is defined as bushfire prone land; and
- The site is not considered to be significantly contaminated land, subject to a management/maintenance order or site audit statement within the meaning of the CLM Act 1997.

NSW EPA Records

As part of the review of historical information, the consultant (ERM 2021b) undertook a review of the NSW EPA contaminated land database and did not identify any sites within a 1 kilometre buffer of the Commonwealth land as having been issued a notice by the NSW EPA. A review of the NSW EPA Contaminated Lands Records of Notice did not identify the Commonwealth land or adjacent sites as having been notified to the EPA.

The consultant (ERM 2021b) additionally undertook a search of the *Protection of the Environment Operations (POEO) Act* (1997) register and identified the following licensed activities within Bringelly:

- Five licensed activities with the closest activity being the Metro railway listed as being located within the Commonwealth land site;
- Eight surrendered licences for activities related to the application of herbicides and road construction activities were listed as having been undertaken within the Commonwealth land site.

Per-and polyfluoroalkyl Substances (PFAS) Investigation and Management Programs

The consultant (ERM 2021b) reported that the Commonwealth land and surrounding area was not recorded on the NSW EPA PFAS investigation program, Department of Defence PFAS investigation program, Department of Defence PFAS management program or Airservices Australia National PFAS Management Program databases.

The consultant (Aurecon 2020) reported that the closest PFAS investigation site is the Kemps Creek Rural Fire Service training site located at 245 Devonshire Road, Kemps Creek, approximately 5 kilometres east of the site. Other potential local sources of PFAS contamination include the SUEZ Resource Recovery Park (approximately 5 kilometres north east of the site) and Brandown Quarry

(approximately 6.5 kilometres north east of the site). The small St Marys/Kennets Airfield to the north (approximately 15 kilometres away) was considered to pose a low risk of PFAS impact to the site.

Other Databases

The consultant (ERM 2021b) undertook searches of and did not identify the Commonwealth land site or surrounding buffer area as being recorded on the following available government databases:

- Defence 3 year Regional Contamination Investigation Program
- Historical or current mining/exploration titles in NSW Department of Industry records
- NSW Planning and Environment State Environment Planning Policy (SEPP) precinct.

A search of relevant databases did not identify the presence of current/historical potentially contaminating land uses including motor garages, dry cleaners, service stations, gasworks, waste management facilities or liquid fuel facilities within the Commonwealth land or surrounding search buffer area.

3.6 Previous Investigations

Previous site investigations undertaken at the site were summarised by the consultant (ERM 2021b).

An overview of the reports is provided below.

Unexploded Ordnance (UXO) Consultancy Services RAAF Receiving Station Site Bringelly, NSW (G-tek 2011)

A review of UXO contamination was undertaken through a review of site records and history, and a 10% UXO field validation survey in 2010.

No evidence of remnant explosive ordnance waste (EOW) was identified during the site survey.

The Bringelly Receiving Station is not recorded as a site on the Defence UXO web-site.

The consultant reported (G-tek 2011) that no additional assessment or remediation works was required in relation to UXOs.

Bringelly RAAF Receiving Station, Infrastructure Assessment Report (GHD 2011)

A condition assessment was undertaken (GHD 2011) of the structures and services within the RAAF Receiving Station site. The overall condition of structures assessed was generally moderate to good with the exception of the double garage (very poor to good) including a service vehicle ramp which were recommended to be demolished if they were no longer required. The transmission tower was also recommended to be demolished based on corrosion and impacts on long term structural stability. An OH&S assessment of the structures was also conducted with overall compliance classified as moderate risk.

RAAF Bringelly Receiving Station, NSW, Heritage Assessment (ERM 2011)

A heritage assessment was undertaken (ERM 2011) for the former RAAF Bringelly Receiving Station to assess potential heritage values and assist Defence in meeting its obligations under the *Environmental Protection and Biodiversity Conservation Act 1999*. Assessment was undertaken of natural heritage (flora and fauna, geodiversity and landscapes), Indigenous heritage (tangible and intangible values) and historic heritage (built and archaeological) values.

The heritage assessment involved background research, heritage register and database searches, site investigation, mapping of site features, archival recording and assessment of heritage values against Commonwealth, State and local heritage criteria.

Ecological values do not meet the Commonwealth Heritage List (CHL) criteria or State Heritage Register (SHR) criteria for natural heritage values.

The Indigenous heritage values of the former RAAF Bringelly site area do not meet the threshold for nomination on the CHL or SHR.

RAAF Bringelly does not meet the threshold nomination to the CHL or SHR for its historic heritage values but meet the necessary threshold for listing at a local level.

Bringelly RAAF Receiving Station, Bringelly, NSW. Stage 1 Overarching Report – Summary Outcomes of Due Diligence Investigations (Sweett 2011)

The Stage 1 Overarching Report summarised due diligence reports on heritage (ERM 2011), environmental/flora and fauna/hazardous materials assessment (Golder 2011b), infrastructure assessment (GHD 2011) and UXOs (G-tek 2011).

A number of constraints associated with the site indigenous heritage values were identified as impacting upon the potential future use of the site. Remedial actions associated with existing soil conditions, buildings and improvements were identified as being required to be addressed. A Remedial Action Plan (RAP) had been developed for remediation of contaminated soils adjoining selected buildings. Stage 2 works including remediation in accordance with the RAP and issue of Heritage Impact Statements prior to disposal of the RAAF site.

Hazardous Building Materials Assessment, Former RAAF Bringelly Receiving Station (Golder 2011a)

A hazardous building material survey of structures at the former RAAF Bringelly site was conducted.

ACM was identified in various buildings, around the former Married Quarters and in a stockpile south of the compound. Elevated concentrations of lead in paint were identified on various structures including the tower and portable generator in the compound, the water tank, lead flashing on roofs and as paint chips on the ground surface outside the structures.

Other hazardous materials including polychlorinated biphenyls (PCBs), synthetic mineral fibre (SMF), potential ozone depleting substance refrigerants and mercury were identified at the site.

Risk assessment based on potential risks was undertaken on the identified hazardous building materials and indicated that risks posed by ACM identified at the site were low to medium; and by lead concentrations in paint were medium to high risk. Risks posed by PCBs and SMF were considered unlikely to pose a health risk (unless the capacitors were damaged and leaked PCBs).

Detailed Site Investigation, Former RAAF Bringelly Receiving Station (Golder 2011b)

A combined Phase 1 and Phase 2 environmental investigation was undertaken for the former RAAF Bringelly receiving station site to identify potential remediation works and inform decisions relating to future land use options.

The scope of works included site history review (aerial photographs, NSW Office of Water groundwater database, Office of Environment and Heritage databases and other publicly available information), site inspection, and soil and groundwater site investigations.

The soil investigation program comprised of installation of 45 test pits and 98 hand augers. Six soil bores were installed to a maximum depth of 12 m bgl. Concentrations of lead or total petroleum hydrocarbon fraction C_{10}-C_{36} were detected above the residential land use criteria at two locations at concentrations not considered to be significant to warrant further investigation or remediation. Exceedances of the phytotoxicity investigation levels for metals detected in near surface soils mainly in the vicinity of the compound area were considered not to warrant further investigation or remediation due to the limited bioavailability to plant species.

Five soil bores were converted to groundwater monitoring wells. Concentrations of cadmium, copper and zinc detected above the adopted site criteria were considered to be indicative of background conditions.

Recommendations were made for the preparation of a Remedial Action Plan (RAP) to address the management or removal of asbestos cement identified (Golder 2011a) as being present at the site and removal of USTs for the divestment of the site.

Remedial Action Plan Former RAAF Bringelly Receiving Station (Golder 2014)

The Remedial Action Plan prepared in 2011 was updated to reflect requirements of the National Environment Protection Measure (NEPM) (2013). The proposed remediation of the former RAAF Bringelly site had been placed on hold and remediation works were not undertaken.

Existing analytical data was reviewed and a limited surface soil sampling program was undertaken in 2013 to determine site specific soil parameters. Lead detected above the adopted residential land use criteria at one location was not considered to be significant to warrant further investigation or remediation. Based on a lack of evidence of vegetation stress, additional investigation or remediation of the EIL or ESL exceedance locations was not considered warranted.

The RAP (Golder 2014) was prepared to address the following:

- Removal of the asbestos cement impacted stockpile to the south of Building 1 and asbestos cement debris on the surface at the former Married Quarters;
- Disposal of the contents and decommissioning of the USTs adjacent to Building 1; and
- Preparation of an unexpected finds protocol to address the potential for ACM, burial areas and UXO to be identified in the future.

The preferred remedial option was excavation and off-site disposal of contaminated soils. The remediation works proposed comprised of the following:

- Potential hydrocarbon contamination from two USTs - decommissioning and in-situ abandonment of the USTs with validation and reinstatement of the removed fuel lines and fuel dispensing area or removal of the USTs with validation and reinstatement of the excavation, and on-site treatment or off-site disposal of excavated contaminated soils.
- Asbestos containing material – surficial ACM removal would be undertaken following demolition of site structures and removal of remnant foundations in the former Married Quarters. Emu pick would be undertaken in accordance with the NEPM (2013) and WA DoH (2009) in the areas of ACM finds identified previously. The stockpiled material present in the former Barracks Area was proposed to be classified and disposed of off-site to a suitably licensed landfill.
- Septic Tank Area – removal and validation.

215 Badgerys Creek Road, Bringelly NSW, Detailed Site Investigation Report (Western Environmental 2019)

Detailed investigation of the former RAAF Bringelly site was undertaken to identify site management risks including bushfire risk; unauthorised access and security; illegal dumping; loose asbestos; boundary fence condition; and any other risks requiring consideration as part of ongoing management of the site.

A site inspection was undertaken to visually identify areas likely to contain ACM. No visual signs of potential ACM in surface soils were evident across the areas of the site inspected.

A targeted asbestos soil investigation was undertaken. Sampling of soil at 17 locations to 0.1 m was undertaken. Analytical results did not detect asbestos in any soil samples collected. The consultant

concluded that while ACM fragments may be found within surface and/or subsurface soils during siteworks and/or via wind and water erosion, the risks associated with the presence of asbestos are considered low and considered not to pose an unacceptable risk to future industrial/commercial and/or residential site users.

Investigation of potential per- and poly-fluoroalkyl substances (PFAS) was undertaken to assess risks associated with historical land uses. The investigation program comprised of:

- Soil sampling at 27 test pit and four soil bore locations.
- Sediment sampling from six on-site and two off-site (along Thompsons Creek) locations.
- Surface water samples from four on-site and two off-site (along Thompsons Creek) locations.
- Sampling of five existing on-site, one off-site (located to the south west) and two new on-site groundwater monitoring wells.

All detectable PFAS concentrations were below the adopted assessment criteria with the exception of the following:

- Soil – PFOS and sum of PFOS/PFHxS exceeded the adopted health and ecological screening values for residential land use with garden accessible soil at two locations within the building compound area.
- Surface water – PFOS above the ecological 99% species protection freshwater screening levels in all samples (0.0017 µg/L to 0.027 µg/L).

The site is not considered to have an identifiable high risk potential source of PFAS although small volumes of AFFF may have been stored on-site. There is likely to be an up-hydraulic gradient off-site PFAS source. The site is not considered to be contributing to observed PFAS concentrations in surface water.

<u>Sydney Metro Greater West Technical Paper 8: Contamination (M2A 2020)</u>

Contamination assessment was undertaken to identify areas of potential existing land contamination, soil and groundwater salinity and ASS for the Sydney Metro Greater West (SMGW) site area; assess requirement for further site investigations; and assess potential construction and operational impacts.

Qualitative risk ranking for construction impacts of the SMGW to sensitive receivers was undertaken for off-airport areas. Two areas of environmental concern were identified for the Aerotropolis Core construction footprint with potential contamination assessed as follows:

- 225-245 Bringelly Creek Road, Bringelly - unidentified items in historical aerials and former potential hazardous building materials. CoPCs include lead, asbestos and PCBs. Overall risk ranking is medium.
- Former OTC site, 215 Badgerys Creek Road, Bringelly – potential contamination sources include former fuel/oil and chemical storage, UST, substation/power station and historical use of hazardous building materials in and around the OTC compound; ACM fragments in surface soils; and potential historical use of AFFF on-site or from up-gradient source. CoPCs include heavy metals, TRH, VOCs, SVOCs, PFAS, PCBs and asbestos. Overall risk ranking is high.

No potential significant sources of groundwater contamination were identified within 500 metres of the Aerotropolis Core Station construction site.

Management and mitigation measures for contamination during construction and operation of the SMGW were outlined.

Sydney Metro Western Sydney Airport Technical Paper 4: Non-Aboriginal heritage (Artefact Heritage 2020)

Assessment was undertaken of potential direct, indirect, archaeological, vibration/settlement and cumulative impacts of the Sydney Metro Western Sydney Airport to listed and potential heritage items and non-Aboriginal archaeological sites. The assessment included a detailed historical review of the study area.

The SMWS Aerotropolis Core construction site will be located in the area previously occupied by several buildings within the RAAF Bringelly site including the main receiving building, main receiving tower, fire hose shed and dangerous goods store. Demolition of the buildings and removal of landscaping around and to the west of the main receiving building, several lamp posts and surface remains of the former staff housing would leave only three ancillary buildings that would be insufficient for local heritage significance to be retained. The construction of the SMWS has been assessed as having a major direct impact on the potential heritage item.

Heritage significance grading of the former RAAF Bringelly base was discussed in detail in the assessment.

Sydney Metro Western Sydney Airport Technical Paper 5: Aboriginal heritage (M2A 2020b)

Aboriginal cultural heritage assessment has been undertaken for the Sydney Metro Western Sydney Airport to identify known and potential Aboriginal heritage constraints and management measures to avoid or minimise harm.

One AHIMS site, an artefact scatter with Aboriginal cultural significance, is located within the bounds of the Aerotropolis Core construction site. No surface artefacts were identified located due to high levels of vegetation. Two artefact scatter sites are located within 200 metres of the Aerotropolis Core in proximity to Moore Gully.

Western Sydney Aerotropolis Constraints and Land Capability Assessment – Stage 1 Report (Aurecon 2020)

A land capability assessment was undertaken consolidating various studies to inform decision making for initial Aerotropolis precinct planning around the Western Sydney International Airport site. A desktop review was undertaken of available site history information, public databases, previous reports and historical aerial photographs for all the precincts.

To identify land properties that need consideration and manage potential risks to development of the Aerotropolis, the following were assessed:

- Groundwater
- Salinity
- Contamination
- Land capability

A broad contamination study was undertaken for the WSA as part of the land capability assessment. A review of aerial photographs, previous contamination investigation reports and regulatory databases was undertaken.

A search of the Department of Defence public record of UXO sites did not find any areas of known UXOs within the site.

The following contamination hazards/potential areas of concern were identified for the Aerotropolis Core Precinct:

- historical uncontrolled filling and earthworks
- historical and existing site structures containing hazardous materials
- herbicide/pesticide use within primary agricultural production areas
- storage and maintenance of equipment and consumables including fuel, oil and chemicals in industrial areas.

Contaminants of potential concern were identified to be as follows:

- metals
- asbestos
- nutrients
- TRH
- BTEX
- PAHs
- phenols
- pesticides (OCPs/OPPs)
- herbicides

Development of a preliminary conceptual site model identified the following potential receptors to the sources of contamination:

- construction and operations workers
- general public during construction
- ecosystems within Badgerys Creek
- groundwater receptors
- on-site remnant vegetation
- ecological receptors.

The identified potential pathways for receptors were as follows:

- dermal (direct contact), inhalation (dust vapour and odour) and ingestion
- direct contact of abstracted groundwater
- stormwater/wastewater inflows to excavations.

<u>Aerotropolis Core Precinct Targeted Site Investigation (ERM 2021a)</u>

Investigation was undertaken of portions of the Commonwealth land to further understand constraints for development of the site and enable collection of additional data to supplement existing information relating to PFAS and uncontrolled filling within Moore Gully. A Ground Penetrating Radar survey, testpitting and targeted sampling of soil, sediment and surface water sampling was undertaken.

Anthropogenic inclusions were identified within fill materials during excavations undertaken in Moore Gully. No ACM or other indicators of significant or widespread anthropogenic waste were identified within testpits or soil bores installed for the soil investigation.

Laboratory analysis did not report concentrations of CoPCs above the laboratory LOR and/or the adopted assessment criteria with the exception of PFAS exceeding the low density residential criteria within surface soils on the eastern boundary of the site compound and PFOS exceeding the 99% freshwater ecological criteria in one surface water sample.

3.7 Audit Opinion

The site history information provided by the consultant (ERM 2021b) has been checked against, and generally meets, the requirements of the EPA 2020a.

The extent of the site history information presented by the consultant (ERM 2021b) is considered sufficient and comprehensive for the purposes of identifying contamination issues at the site as part of the site investigation process.

4. Conceptual Site Model

The *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)* (NEPC 2013) identifies a conceptual site model (CSM) as a representation of site related information regarding contamination sources, receptors, and exposure pathways between those sources and receptors. The development of a CSM is an essential part of all site assessments and remediation activities.

NEPC 2013 identified the essential elements of a CSM as including:

- Known and potential sources of contamination and contaminants of concern including the mechanism(s) of contamination;
- Potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air);
- Human and ecological receptors;
- Potential and complete exposure pathways; and
- Any potential preferential pathways for vapour migration (if potential for vapours identified).

4.1 Sources of Contamination

Based on a review of site history and previous site investigations, the consultant (ERM 2021c) identified the following areas of potential contamination for the site:

- Uncontrolled filling from unknown sources;
- ACM within on-site service pits/conduits;
- On-site spraying of weeds;
- Per- and polyfluoroalkyl substances (PFAS) impact across general site area; and
- Off-site sources (within Commonwealth Land) including identified surface asbestos impacts/stockpiles, central compound infrastructure and potential contaminating practises associated with the adjacent residential dwellings.

Based on the identified sources of contamination, the consultant (ERM 2021c) identified the following contaminants of potential concern (CoPCs) for the site:

- Heavy metals (arsenic, cadmium, chromium, copper, lead, nickel, mercury and zinc)
- Total Recoverable Hydrocarbons (TRH)
- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Organochlorine and organophosphorus pesticides (OCPs/OPPs)
- Volatile organic compounds (VOCs)
- Semi-volatile organic compounds (SVOCs)
- Per- and polyfluoroalkyl substances
- Asbestos.

4.2 Potentially Affected Media

Potentially contaminated media included soil, sediment, groundwater and surface water.

4.3 Potential Human and Ecological Receptors

Potential human receptors identified included the following:

- Current site users (commercial/industrial);
- Future site users (residential, commercial/industrial and recreational);
- Workers carrying out construction, installation or maintenance works within the site;
- Potential future users of groundwater (beneficial re-use for irrigation including reinjection and surface waters); and
- On-site and adjacent sensitive receptors e.g. adjacent residents and ecological receptors.

4.4 Potential Exposure Pathways

The consultant (ERM 2021c) identified the following potential exposure pathways:

- Dermal contact and/or incidental ingestion with contaminated surface water, soils and sediments;
- Inhalation of contaminated dust (soils);
- Transport of contamination through surface water flows;
- Transport of contamination to underlying groundwater aquifers; and
- Transport of contaminants through mechanical transport (i.e. excavation, tracking during vehicle movement etc.).

4.5 Audit Opinion

The consultant (ERM 2021c) identified potential contamination issues based on site history review and previous site investigation programs for the former Commonwealth land. The list of potential contaminants and associated potentially contaminated media are considered to have been suitably comprehensive noting the history of the site. Taking into consideration the site history review and investigations previously undertaken at the site, the auditor considers that the list of CoPCs was adequate in assessing the nature and extent of contamination on-site.

The consultant (ERM 2021c) also considered both human and ecological receptors, potential contaminant transport mechanisms and potential exposure pathways. While it is noted that contaminant transport mechanisms have been incorrectly considered as potential exposure pathways for receptors by the consultant, this discrepancy is considered not to be significant and does not affect the outcome of the audit. The auditor considers that potential source-pathway-receptor linkages have generally been adequately addressed.

The auditor notes that the CSM prepared by the consultant (ERM 2021c) was sufficiently detailed and generally meets the requirements of the NEPC 2013.

Overall, the auditor considers that the identified potential contamination issues and potentially contaminated media were appropriate for the purposes of assessing the contamination status of the site. While the consultant identified ACM as a potential contamination issue in service pits/conduits, ACM should also be considered a potential contamination issue in any fill materials of unknown origin and also around any former buildings such as the former Married Quarters.

5. Sampling Analytical and Quality Program

5.1 Data Useability Assessment

An assessment of quality assurance and quality control (QA/QC) has been undertaken by the consultant (ERM 2022c) by developing data quality indicators (DQIs), broadly based on the seven-step process referred to in EPA 2017.

The auditor has undertaken a review of the field and laboratory QA/QC undertaken by the consultant, which has been summarised in **Tables 5.1** against the PARCC parameters (precision, accuracy, representativeness, comparability and completeness).

Table 5.1 Data Usability Assessment (ERM 2022c)

Parameter	DQIs	Requirement	Auditor Assessment
Field and Lab QA/QC			
Precision	Intra-laboratory duplicates (blind)	Collected at a rate of 1 per 20 samples. Analysed for primary contaminants of concern. RPDs typically 30% (inorganics) -50% (organics)	19 intra-lab soil duplicates were collected and analysed for the contaminants of concern during the intrusive soil investigation. The frequency of collection equated to 1:25, below the minimum requirement. Due to the large and consistent nature of the dataset, the reduced frequency of intra-laboratory sample analyses was not considered by the consultant to significantly reduce the precision of the dataset. RPDs were below the acceptable range with the exception of the following sample pairs: • AI_TP203_0.1 and AI_20211102_D03 (arsenic 85%; chromium (III+VI) 92%, copper 56%, lead 76%, nickel 60% and zinc 73%) • AI_TP112_0.1 and AI_20211108_D02 (arsenic 55% and chromium (III+VI) 51%) • AI_TP1450.1 and AI_20212208_D01 (TPH C_{15}-C_{28} 40% and TPH C_{10}-C_{36} 88%) • AI_TP112_0.1 and AI_20211108_D02 (TPH C_{10}-C_{36} 87% and diethylphthalate 131%) • AI_TP225_0.4 and AI_20212117_D01 (arsenic 67%) • AI_TP27_0.1 and AI_20211220_D02 (arsenic 62%, chromium (III+VI) 45%, lead 71% and zinc 60%) • AI_TP86_0.4 and AI_20211221_D01 (arsenic 70%, chromium(III+VI) 67%, TPH C_{10}-C_{16}/TRH F2 188% and TRH C_{10}-C_{40} 176%) The RPD exceedances were reported by the consultant to be generally due to natural variability or heterogeneity of the materials sampled and as such are not considered to impact on the conclusions of the DSI report. With respect to RPD exceedances for semi-volatile and volatile analytes, large RPDs have generally occurred where the analyte concentration has been reported below the laboratory LOR for one sample pair and above the LOR for the corresponding paired sample however as the reported concentrations are below the adopted site criteria, the RPD exceedances are not considered by the consultant to affect the conclusions of the DSI report. The auditor concurs with the consultant's findings.

Parameter	DQIs	Requirement	Auditor Assessment
Precision	Intra-laboratory duplicates (blind)	Collected at a rate of 1 per 20 samples. Analysed for primary contaminants of concern. RPDs typically 30% (inorganics) -50% (organics)	Two intra-lab groundwater duplicates were collected and analysed for the contaminants of concern during the groundwater investigation. The frequency of collection equated to 1:5.5. RPDs were below the acceptable range with the exception of sample pair MW05 and D01_20220624 (copper 100%) where the analyte concentration for the duplicate sample was below the laboratory LOR resulting in a large RPD. The auditor concurs with the consultant's finding that the RPD exceedance is not considered to affect the dataset.
			One intra-lab surface water duplicate was collected and analysed for the contaminants of concern during the surface water investigation. The frequency of collection equated to 1:9. RPDs were below the acceptable range with the exception of sample pair SW2 and D01_20220621 (copper 133%, nickel 143% and zinc 166%) where the analyte concentration for one sample (for a sample pair) was below or close to the laboratory LOR resulting in large RPDs. The auditor concurs with the consultant's findings that the RPD exceedances are not considered to affect the dataset.
			One intra-lab sediment duplicate was collected and analysed for PFAS during the sediment investigation. The frequency of collection equated to 1:10. RPDs were below 30%.
	Inter-laboratory duplicates (spilt)	Collected at a rate of 1 per 20 samples. Analysed for primary contaminants of concern. RPDs typically 30% (inorganics) -50% (organics)	18 inter-lab soil duplicates were collected and analysed for the contaminants of concern during the intrusive soil investigation. The frequency of collection equated to 1:26, below the minimum requirement. Due to the large and consistent nature of the dataset, the reduced frequency of intra-laboratory sample analyses was not considered to significantly reduce the precision of the dataset. RPDs were below the acceptable range with the exception of the following sample pairs: • AI_TP203_0.1 and 20211102_T03 (arsenic 70%, chromium (III+VI) 73%, copper 50% and lead 59%) • AI_TP225_0.4 and 20211217_T01 (arsenic 100%, chromium (III+VI) 50%, lead 51% and mercury 59%) • AI_TP27_0.1 and AI_20211220_D01 (arsenic 62%, lead 71% and zinc 60%) The RPD exceedances were reported by the consultant to be generally due to natural variability or heterogeneity of the materials sampled and as such are not considered to impact on the conclusions of the DSI report. The auditor concurs with the consultant's findings.

Parameter	DQIs	Requirement	Auditor Assessment
Precision	Inter-laboratory duplicates (spilt)	Collected at a rate of 1 per 20 samples. Analysed for primary contaminants of concern. RPDs typically 30% (inorganics) -50% (organics)	Two inter-lab groundwater duplicates were reported by the consultant to have been collected and analysed for the contaminants of concern during the groundwater investigation. The frequency of collection equated to 1:5.5. The auditor notes that the split duplicate results were not presented in the DSI report. While this omission is a non-conformance, the auditor considers that the outcomes of the audit are not affected given the low concentrations (generally below the laboratory LOR) of analytes detected in groundwater at the site.
			One inter-lab surface water duplicate was reported by the consultant to have been collected and analysed for the contaminants of concern during the surface water investigation. The frequency of collection equated to 1:9. The auditor notes that the split duplicate results were not presented in the DSI report. While this omission is a non-conformance, the auditor considers that the outcomes of the audit are not affected given the low concentrations (generally below the laboratory LOR) of analytes detected in surface water at the site.
			One inter-lab sediment duplicate was reported by the consultant to have been collected and analysed for PFAS during the sediment investigation. The frequency of collection equated to 1:4. The auditor notes that the split duplicate results were not presented in the DSI report. While this omission is a non-conformance, the auditor considers that the outcomes of the audit are not affected given that concentrations of PFAS were not detected above laboratory LOR in sediments sampled at the site.
	Laboratory duplicates	One per batch. RPDs less than 50%.	Laboratory duplicates were undertaken by the laboratories at a rate of one per batch. The reported RPDs were within laboratory acceptance limits with the exception of results for 20 sample pairs, generally for heavy metals and TRH analyses. The consultant considered the RPD exceedances do not affect the overall validity of the dataset. The auditor concurs with the consultant's findings.
Accuracy	Field rinsate blanks	Collected at a rate of 1 per piece of decontaminated sampling equipment. Analysed for primary contaminants of concern. Laboratory results below the laboratory limit of reporting (LOR).	One field rinsate sample was collected during soil sampling where a hand auger or trowel were used. The field rinsate sample was analysed for the primary contaminants of concern and all results were reported below the laboratory LORs with the exception of arsenic prior to filtration. No rinsate samples were collected during the groundwater, surface water or sediment sampling programs. The consultant considers the rinsate results not to affect the reliability of the dataset. The auditor concurs with the consultant's findings.

Parameter	DQIs	Requirement	Auditor Assessment
Accuracy	Trip blanks	Collected at a rate of 1 per day of sampling where primary contaminants of concern include volatiles. Analysed for volatiles of concern. Laboratory results below laboratory LOR.	Nine laboratory prepared water trip blanks were submitted by the consultant for the soil, sediment, groundwater and surface water sampling days with all results reported below laboratory LORs indicating that cross contamination had not occurred during the transport of samples to the laboratory.
	Trip spike	Collected at a rate of 1 per batch where primary contaminants of concern include volatiles. Laboratory results / recovery within 30 % of the spiked concentration.	Nine water trip spikes were analysed during the investigation program with laboratory recoveries reported between 30 - 110% with the exception of o-xylene recovery for the trip spike analysed on 11/11/21. Trip spike recoveries indicated that the loss of volatile compounds during storage and transport was not unacceptable. While no soil matrix trip spike analyses were undertaken, the use of water trip spikes is considered acceptable .
	Laboratory surrogate spikes	Surrogate spikes to be performed as required by NATA accreditation, generally per sample analysed. Recoveries to be within 70-130 % (inorganics), ±50 % (organics) or 10-140 % (SVOCs).	Surrogate recoveries were generally reported within the NATA accredited laboratory control limits.
	Laboratory method blanks	Laboratory method blanks to be performed as required by NATA accreditation, generally 1 blank per batch. Results to be below laboratory LOR.	All laboratory method blanks were reported less than the LOR.
	Laboratory control samples (LCS)	LCS to be performed as required by NATA accreditation, generally one per 20 samples per batch.	LCS recoveries were reported to be within laboratory control limits.
	Laboratory matrix spikes (MS)	MS to be performed as required as NATA accreditation, generally one per 20 samples per batch. Recoveries to be within 70-130 % or 30-130 % (phenols only).	Matrix spike recoveries were reported within laboratory control limits.

Parameter	DQIs	Requirement	Auditor Assessment
Sampling and Analytical Schedule and Sampling Methodology			
Representativeness	Soil sampling locations	Samples to be collected on a representative basis consistent with the CSM.	Test pits were excavated to provide overall coverage of the site area on an approximate 57 m triangular grid to detect a hotspot of 30 m radius with 95% confidence. The sampling density was developed using Visual Sample Plan software designed by the US Department of Energy. Test pits were excavated within areas of open space. There was some minor deviation from the planned grid arrangement in the actual soil sampling locations due to the lack of visual landmarks over the large size area and limitations in on-site hand-held GPS data. Some soil sampling locations were also moved due to accessibility issues in low lying flood prone site areas. Areas of potential Aboriginal heritage significance were identified during the sampling program resulting in the reduction of soil sampling locations by 28. Soil bores were installed in place of test pits at locations where site conditions precluded excavation of test pits. Due to a sampling error, samples from some testpits were not analysed and soil bores were also installed in those locations to obtain soil samples in a timely manner. The auditor notes that while the number of soil sampling locations undertaken was less than that as per the requirements of Table A of NSW EPA (1995) which was the current guideline at the time of the site investigations, the sampling design adopted by the consultant generally met the objectives of EPA 1995 for hotspot detection of 30 m diameter with 95% confidence. While the auditor notes that the proposed grid-based sampling approach was not achieved in some areas, the auditor concurs that this non-conformance is not considered to have affected the outcome of the audit.
	Soil sampling depths and intervals	Soil sampling depths should be consistent with the anticipated distribution of contamination as detailed in the consultant's CSM.	Test pits were excavated to a maximum depth of 2.0 m bgs or the occurrence of natural materials whichever was encountered first, with samples collected at near surface and change in lithology. Two samples were selected from each location and submitted for laboratory analysis. All test pit locations extended into underlying natural clays. Soil bores were installed to a maximum depth of 0.5 m bgs. The soil sampling depths and intervals at each of the sampling locations were appropriate given the identified potential contamination sources and site geology. The auditor considers the sampling depths are considered appropriate to assess the vertical extent of contamination at the site.
	Soil sampling methodology	Soil samples to be collected using a methodology which is appropriate for the primary contaminants of concern.	Soil samples were collected either directly from the hand auger or excavator bucket. Each soil sample was collected using fresh nitrile gloves and placed into laboratory supplied 250 mL Teflon-lined jars and clip-lock bags, each with a unique sample ID.

Parameter	DQIs	Requirement	Auditor Assessment
Representativeness	Soil sampling methodology	Soil samples to be collected using a methodology which is appropriate for the primary contaminants of concern.	Collected samples were immediately stored on ice in an esky and sent to NATA-accredited analytical laboratories under chain of custody conditions for analysis. The auditor considers that the sampling methods adopted by the consultant are considered appropriate and are not likely to affect the representativeness of the soil data.
	Groundwater sampling locations	Groundwater sampling locations to assess areas of concern, allow for lateral delineation of contamination and assess the groundwater flow direction.	Eleven groundwater monitoring wells were installed across the site providing general coverage to assess underlying aquifers and any potential impacts from historical land use within the site and the surrounding area. The auditor considers that the number and location of monitoring wells installed were sufficient to provide an assessment of groundwater quality within the site.
	Groundwater well construction	Wells to be constructed in accordance with the current version of the Minimum Constructions Requirements for Water Bores in Australia, and screened to target the likely contaminated portion of the water column.	The monitoring wells were installed to depths of between 5 m bgl and 21.5 m bgl. The monitoring wells were constructed using 50 mm diameter Class 18 PVC casing and machine slotted screen intervals. Wells were backfilled with a gravel pack followed by an annular seal of granular bentonite pellets. The wells were finished with airtight well caps and monument standpipe. A copy of the borelogs was provided by the consultant (ERM 2022c) with a summary also provided in the report and which provides sufficient detail on the construction of the monitoring wells. The auditor considers that the monitoring wells were suitably installed in accordance with relevant guidelines and were suitable to assess groundwater conditions at the site.
	Groundwater sampling methodology	Groundwater samples to be collected approximately 7 days after well installation and development. Groundwater samples to be collected using low flow methods (where it can be demonstrated that this is appropriate), or by purging at least 3 well volumes, until field parameters have adequately stabilised.	Following installation, the monitoring wells were purged dry. Field parameters, including pH, temperature, conductivity, redox potential and dissolved oxygen were measured following purging and prior to sampling using a water quality meter. A summary table of the field parameters was provided in the consultant's report (ERM 2022c). Groundwater samples were collected using Hydrasleeves. The auditor considers that the groundwater sampling methods adopted by the consultant were generally considered appropriate and not likely to affect the representativeness of the data.
Representativeness	Sediment sampling locations	Samples to be collected on a representative basis consistent with the CSM.	Sediment was sampled from 10 drainage line/overland flow path locations across the site. Where grass, reeds or other vegetation growth covered sediment, the material was moved aside and sediment samples were collected from directly underneath the vegetation layer.

Parameter	DQIs	Requirement	Auditor Assessment
Representativeness	Sediment sampling locations	Samples to be collected on a representative basis consistent with the CSM.	The auditor considers the sediment sampling locations to be appropriate to assess potential impacts arising from surface water flows within the site.
	Sediment sampling methodology	Sediment samples to be collected using a methodology which is appropriate for the contaminants of concern.	Sediment samples were collected via fresh nitrile gloved hand. Samples were placed in a sediment tray to allow excess water to be drained off prior to placement into laboratory supplied sample jars. Collected samples were immediately stored on ice in an esky and sent to NATA-accredited analytical laboratories under chain of custody conditions for analysis of PFAS. The auditor considers that the sampling methods adopted by the consultant are appropriate and not likely to affect the representativeness of the sediment data.
	Surface water sampling locations	Surface water samples to be collected on a representative basis consistent with the CSM.	Surface water was sampled from nine drainage lines that flow into the site to assess migration of CoPCs from adjacent sites. The auditor considers the surface water sampling locations to be appropriate to assess potential impacts arising from surface water flows within the site and from adjacent upstream sites.
	Surface water sampling methodology	Surface water samples to be collected using a methodology which is appropriate for the contaminants of concern.	Surface water samples were collected via fresh nitrile gloved hand or using a Swing Sampler sampling device from the middle of the water column. Surface water samples were collected prior to sediment sampling to minimise sediment in samples. Collected samples were immediately stored on ice in an esky and sent to NATA-accredited analytical laboratories under chain of custody conditions for analysis of CoPCs. The auditor considers that the sampling methods adopted by the consultant were appropriate to obtain representative surface water data.
	Soil, sediment, groundwater and surface water sampling containers	Soil and sediment samples to be collected into laboratory supplied, clean unpreserved Teflon lined jars. Groundwater and surface water samples to be collected into laboratory supplied, clean and appropriately preserved sampling containers.	Soil and sediment samples were immediately placed in laboratory supplied samples jars which were sealed tight and placed on ice for transport to the analytical laboratories. Soil samples collected for asbestos analysis were placed in sealed zip-lock plastic bags for analysis. Groundwater and surface water samples were immediately placed into appropriately preserved containers provided by the laboratory and placed on ice for transport to the analytical laboratories.

Parameter	DQIs	Requirement	Auditor Assessment
Representativeness	Soil, sediment, groundwater and surface water sampling equipment decontamination	Sampling equipment to be decontaminated between sampling locations or between sampling depths; and monitoring well locations where significant contamination is encountered.	The consultant (ERM 2022c) reported that soil and sediment sampling was conducted by hand using fresh nitrile gloves for each sample. Groundwater samples were reported (ERM 2022c) to have been collected using Hydrasleeves and placed into laboratory prepared sample containers. Surface water samples were reported to have been sampled directly into the sample containers or using a Swing Sampler with samples decanted into directly into laboratory prepared sample containers. All sampling equipment was reported to be decontaminated between sampling locations where designated disposable materials were not used. The auditor considers the sampling methods employed by the consultant during the investigation works are generally acceptable and are unlikely to have resulted in cross-contamination between sample locations.
	Soil sample contamination screening	Soil samples to be screened for contamination via visual / olfactory observations and photo-ionisation detector (PID) measurement.	The consultant (ERM 2022c) provided borelogs detailing observations of material types; visual and olfactory observations; sample depths; and soil moisture / water observations, where present. Soil samples were screened in the field using a PID during the field investigations works.
	Sample storage and transport	Samples to be placed in an insulated container and chilled. Samples to be transported to laboratory under chain of custody conditions.	All soil, sediment, groundwater and surface water samples were transported in ice-cooled/insulated chests, under chain of custody conditions, to laboratories that were NATA accredited for the analyses performed. The consultant provided detailed laboratory reports and chain of custody documentation for the soil, sediment, groundwater and surface water sampling works. Review of sample receipt advice issued by the laboratories indicated that all samples were intact, correctly preserved, and chilled (as appropriate) at the time of receipt.
	Laboratory sample receipt advice	No damaged containers. No samples submitted in containers which have not been chilled. No samples to be submitted without sufficient times to comply with recommended holding times.	Laboratory sample receipt advice provided by the nominated laboratories confirmed that all samples were received in suitable condition, with sufficient times to comply with recommended holding times.

Parameter	DQIs	Requirement	Auditor Assessment
Representativeness	Holding times	Samples to be extracted and analysed within recommended holding times.	Samples were generally extracted and analysed within holding times with the exception of volatile compounds analyses for batch 838531. Due to an administration error, the CoC was received by the laboratory seven days after sample collection resulting in exceedance of the holding time for volatile analysis. The consultant (ERM 2022c) considered that as the holding time breaches formed a small subset of a large dataset and based on a lack of indication of anthropogenic contamination from field observations, the holding time breach is not significant and does not alter the conclusions of the investigation. The auditor concurs with the findings of the consultant.
	Analytical Method	Samples to be analysed using NATA accredited methodology.	Laboratories used included: Eurofins Environment Testing Australia Pty Ltd (primary) and ALS Sydney (secondary). All laboratories utilised were NATA accredited. The primary laboratory and the secondary laboratory employed for the chemical analyses used analytical methods which were considered appropriate for the identified COPCs at the site and for which the laboratories were NATA accredited.
Completeness	Sampling, analysis and quality plan completeness	100 % of sampling, analysis and quality plan to be implemented.	The sampling program was undertaken generally in accordance with the SAQP (ERM 2021b). Where sampling and analysis deviated from the SAQP, the rationale and methodology were documented by the consultant (ERM 2022c). The auditor considers the scope of the soil, sediment, groundwater and surface water investigations undertaken to have been appropriate to meet the overall objectives of the audit.
	Field documentation	All relevant field documentation to be collated including sampling logs and calibration records.	The consultant provided test pit/borehole logs, and calibration records for the water quality meter, interface meter and PID. Field notes other than those included in the tables and borelogs were not provided.
	Laboratory documentation	All relevant laboratory documentation to be collated, including chain of custody records, sample receipt advice and analytical reports.	The consultant provided all relevant COC documentation; laboratory sample receipt advice; and full laboratory certificates in the reports.
	Critical sample validity	All critical sample data to be valid.	The auditor considers that the data is considered reliable, for the purposes of the soil, sediment, groundwater and surface water investigations.

Parameter	DQIs	Requirement	Auditor Assessment
Completeness	Sampling, analysis and quality approach	Adequately comparable sampling, analysis and quality approach to be used throughout the project.	The auditor considers that the data is comparable, as consistent sampling methods were employed throughout the investigation works. All laboratory analyses were undertaken by NATA accredited laboratories. Furthermore, consistent field staff were employed during the field program.
	Sampler	Samplers used throughout the project to have sufficient experience.	Consistent experienced field staff were employed by consultant during the field program.

5.2 Audit Opinion

The quality assurance/quality control measures employed by the consultant (ERM 2022c) were checked and found to indicate that the consultant implemented a systematic planning process, and adequately complied with the requirements outlined in NSW EPA 2017 and 2020a, and NEPC 2013.

The laboratory QA/QC results have been reviewed and the results indicate that the analytical laboratories were achieving adequate levels of precision and accuracy. As such, the sampling, analytical and quality protocols undertaken by the consultant were considered to be adequately reliable for the purpose of assessing the contamination status of the site; and the data is therefore considered reliable and useable for the purpose of this audit.

6. Assessment Criteria

The consultant (ERM 2022c) stated that a range of assessment criteria based on the possible land use scenarios permissible for the site were used for screening purposes to provide flexibility for master planning.

6.1 Soil Criteria

The site was assessed by the consultant (ERM 2021b and 2022c) against guidelines presented in NEPC (2013) and NSW EPA made or approved guidelines, comprising the following:

- Health Investigation Levels (HILs)
  - HIL A – residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, no poultry, also includes children's day care centres, preschools and primary schools
  - HIL C – public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths.
  - HIL D – commercial/industrial, includes premises such as shops, offices, factories and industrial sites
- Health Screening Levels (HSLs) for vapour intrusion for clay soils
  - HSL A & B for low-high density residential land use
  - HSL C for recreational/open space land use
  - HSL D for commercial/industrial land use
- Management Limits for TPH fractions F1 – F4 in fine soils
  - residential, parkland and public open space
  - commercial and industrial
- Health based guidance values for perfluorooctane sulfonate (PFOS)/perfluorohexane sulfonate (PFHxS) and perfluorooctanoic acid (PFOA) (HEPA 2020)
  - HIL A - residential with garden/accessible soil
  - HIL C – public open space
  - HIL D – industrial/commercial
- HSLs for bonded ACM, fibrous asbestos (FA), and asbestos fines (AF) in soil. No visible asbestos for surface soil.
- Ecological Investigation Levels (EILs) for fine soils
  - urban residential and public open space
  - commercial and industrial
- Ecological Screening Levels (ESLs) for fine soils
  - urban residential/ public open space land use
  - commercial and industrial
- Ecological guideline values for PFOS and PFOA
  - ecological direct exposure
  - ecological indirect exposure

The consultant also adopted aesthetic criteria as part of the site assessment.

6.2 Groundwater Criteria

Assessment of groundwater contamination (ERM 2021b and 2022c) was undertaken against guidelines presented in NEPC (2013) and other NSW EPA made or approved guidelines, and comprised:

- Health Screening Levels (HSLs) for vapour intrusion
  - HSL A & B for vapour intrusion in low-high density residential land use
  - HSL C for recreational/open space land use
  - HSL D for commercial/industrial land use
- *Australian Drinking Water Guidelines* (NHMRC 2018)
- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG 2018) – 95% protection levels for slightly to moderately disturbed fresh water systems
- Health based guidance values for PFOS/PFHxS and PFOA for recreational water quality and drinking water (HEPA 2020)
- Ecological guideline values for PFOS and PFOA – 95% and 99% protection of species for freshwater (HEPA 2020).

6.3 Surface Water Criteria

Assessment of surface water contamination (ERM 2021b and 2022c) was undertaken against guidelines presented in NEPC (2013) and other NSW EPA made or approved guidelines, and comprised:

- *Australian Drinking Water Guidelines* (NHMRC 2018)
- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG 2018) – 95% protection levels for slightly to moderately disturbed fresh water systems
- Health based guidance values for PFOS/PFHxS and PFOA for recreational water quality (HEPA 2020)
- Ecological guideline values for PFOS and PFOA – 95% and 99% protection of species for freshwater (HEPA 2020).

6.4 Sediment Criteria

As there are no published health or ecological screening values for PFAS in sediment, assessment of PFAS contamination (ERM 2021b and 2022c) was undertaken against health-based guidance values for PFOS/PFHxS and PFOA (HEPA 2020) in soil (HIL A residential with garden/accessible soil) and ecological direct exposure to PFOS/PFOA criteria for soil.

The consultant (ERM 2022c) considered that the frequency and duration of exposure to sediments during recreational use of water bodies is much lower than that assumed for soil exposure in a residential setting. Use of residential soil criteria was therefore considered protective of potential risk due to exposure to sediment.

6.5 Audit Opinion

The soil criteria adopted by the consultant (ERM 2021b and 2022c) for the assessment of human health and ecological risks have been checked against and were consistent with, criteria made or approved by the EPA for the proposed range of land uses at the site which includes commercial/industrial land use, medium and high density residential, educational, community, retail, hotel and childcare land uses.

The criteria adopted by the consultant (ERM 2021b and ERM 2022c) for the assessment of asbestos contamination is adequately conservative and suitable.

The consultant also took into consideration aesthetic issues (i.e., odours and discolouration) as part of the assessment works, in accordance with NEPC 2013 and EPA 2017.

The groundwater investigation criteria adopted by the consultant (ERM 2021b and 2022c) have been checked against, and were sourced from relevant EPA made or approved guidelines. The drinking water guidelines were adopted as a conservative tier 1 human health screening criteria for recreational water receptors and considered appropriate. The nearest surface water body and potential ecological receptor is Moore Gully which enters Thompsons Creek and is a tributary of South Creek and the fresh water environmental guidelines were adopted in accordance with NEPC 2013. The adopted groundwater criteria are considered appropriate for assessing the potential impacts to ecological receptors relevant to the site setting (i.e., in a slightly to moderately disturbed system).

Surface water investigation criteria adopted by the consultant (ERM 2022c) for the assessment of human health and ecological risks have been checked against, and were sourced from relevant EPA made or approved guidelines.

The adoption of soil investigation criteria by the consultant (ERM 2021b and 2022c) for the assessment of human health and ecological risks from PFAS compounds are considered conservative and appropriate.

Overall, the auditor considers that the soil, groundwater, sediment and surface water criteria adopted by the consultant were appropriate for assessing the identified contaminants of concern at the site, and nature and extent of contamination that may be present at the site.

7. Preliminary Site Investigation

A Preliminary Site Investigation (PSI) (ERM 2021b) was undertaken for the area identified as Stage 1 within the Aerotropolis Core Precinct Master Plan, otherwise known as the 'Commonwealth land' or Lot 101 in DP 128949 to assist in the development of the master plan. The concept plan includes the following key development aspects:

- Moore Gully Billabongs, Thompson Park and a Waterfront Precinct located within the southern portion;
- Educational facilities, a metro plaza, green gateways and sports fields located within the central portion;
- Manufacturing/industrial lands, CSIRO facility, TAFE/multiversity and hotel located within the northern portion.

Landscaping proposed within the precinct would include open water bodies for flood water storage/adaptive reuse, swimming and play area within the existing Moore Gully alignment and planted native vegetation throughout.

Potential contamination was identified to be present within the Commonwealth land and surrounding area due to historical and recent land use practises. The PSI included a review of background information (summarised in **Section 3**) and completion of targeted groundwater, surface water and sediment sampling for assessment of PFAS within the Commonwealth land.

7.1 Summary of Identified Contamination

Based on the review of previous investigations undertaken on the Commonwealth land and surrounding area, the consultant (ERM 2022c) summarised the occurrence and extent of contamination at the site as presented in **Table 7.1**.

Table 7.1: Summary of Previously Identified Contamination

Location	Area of Environmental Concern	Comment
On-site First Building Area	Unexpected finds/buried waste/fill materials	• Potential of additional fill materials to have been placed in roadways or other burial areas within the site. • Further assessment of this area may be required to assess the potential for site management/remediation requirements prior to commencement of development.
	Potential weed spraying and general site area	• Potential historical land uses may have included weed spraying to control weeds. • Concentrations of PFAS (specifically PFOS + PFHxS) have been identified in low concentrations in surface soils at various locations throughout the surrounding area. The detected PFAS may be associated with surface runoff from the central compound area within the former RAAF facility.
	Asbestos service pits/conduits	• Survey of on-site service pits/conduits is required to assess the potential for additional asbestos to be present and the requirement for management and/or remediation of the site to be suitable for the proposed development.
Off-site (within remainder of Commonwealth land)	Central compound – fuel storage	• Groundwater monitoring to date has not identified elevated concentrations of hydrocarbons within the vicinity of underground storage tanks (USTs). • An investigation undertaken in 2011 indicated that fuel tanks still contained diesel/petroleum products. • As USTs were unlikely to have been maintained or assessed for loss since that time, there is potential for leaks to have occurred. • Fill materials adjacent to USTs were identified to be stained and hydrocarbon odours were noted.

Location	Area of Environmental Concern	Comment
	Central compound – hazardous building materials	• Hazardous materials identified within building structures require removal/management and may have impacted localised surrounding surface soils (through degradation). • Hazardous building materials are to be removed as per relevant regulatory requirements where buildings are to be demolished. Validation of surrounding surface soils is required following removal. • The hazardous materials register is required to be updated and maintained where buildings are to be retained. Validation of surrounding soils may also be required to demonstrate suitability for the proposed development.
	Central compound – septic tank	• Previous investigations identified the presence of a septic tank within the central compound. Investigations had not targeted the septic tank and the potential contamination of surrounding soils may exist.
	Married Quarters – asbestos surface impact	• Surficial asbestos impact has been identified within the vicinity of the former Married Quarters. • Potential exists for additional impact from degradation of building structures. • Potential exists for asbestos impacts in fill that was observed to a depth of 0.5 metres below ground level (m bgl).
	Asbestos impacted stockpile	• Approximately 1,600 m^3 of asbestos impacted fill has been identified within a stockpile located south to the administration building.
	General area - PFAS	• Concentrations of PFOS + PFHxS in soil have been detected exceeding the screening risk criteria for residential land use at two surface soil locations near the chemical storage shed and USTs. • Concentrations of PFOS have been detected exceeding the fresh water 99% species protection criteria (NEMP 2020) in surface water samples. • No potential sources of PFAS impact had been identified. Further consideration of potential additional PFAS impact is required.
	Adjacent residential dwellings	• Residential blocks adjacent to the Commonwealth land have not been inspected during previous investigations. • Potential exists for contamination associated with residential land uses such as weed spraying, fertilisers, septic tanks, minor vehicle maintenance activities and degradation of hazardous building materials (asbestos, lead paint). • Further assessment may be required to assess potential site management/remediation requirements prior to the commencement of development.
	Unexpected finds/buried waste/fill materials	• Potential exists for additional fill materials to have been placed within the gully located within the southern portion of the Commonwealth land. • Further assessment may be required to assess the potential site management/remediation requirements prior to the commencement of development.

Previous site investigations (Western Environmental 2019) had identified detectable concentrations of PFAS within soil and groundwater at several locations within the Commonwealth land. Additional targeted assessment was undertaken as part of the PSI for the assessment of PFAS. Assessment was undertaken of groundwater, surface water and sediment.

7.2 Results

The consultant (ERM 2021b) provided summary tables (**Appendix E**), in addition to detailed laboratory reports and chain of custody documentation for the investigations undertaken. Figures showing exceedances of adopted assessment criteria were also included (**Appendix D**).

Concentrations of PFAS compounds were detected below the laboratory LOR and/or the adopted assessment criteria in all groundwater, surface water and sediment samples with the exception of three surface water samples collected from the eastern portion of the Commonwealth land which detected concentrations as follows:

- SW2 – PFOS exceeding the 99% freshwater criteria;
- SW8 – sum of PFHxS and PFOS exceeding the drinking water criteria and PFOS exceeding the 99% freshwater criteria; and
- SW11 – sum of PFHxS and PFOS exceeding the drinking water criteria and PFOS exceeding the 99% freshwater criteria.

7.3 Consultant's Interpretations and Conclusions

The consultant (ERM 2021b) considered the results to be generally consistent with previous investigations of PFAS (Western Environmental 2019). While the specific source of PFAS was unclear, the results of the PSI indicated the potential for PFAS to be migrating from off-site sources. Further assessment of the Commonwealth land was recommended to assess potential historical sources of PFAS located within the main compound (chemical storage area, firefighting systems etc).

The consultant noted that based on the range of potentially contaminating historical land uses/activities identified within the Commonwealth land and surrounding area, a DSI should be undertaken to assess the contamination status of the Aerotropolis Core precinct and potential risk to human health and sensitive ecological receptors. The DSI would further characterise fill material volumes that may require management and/or remediation and aid in planning for future development works.

7.4 Audit Opinion

The consultant (ERM 2021b) provided tables which adequately summarised the laboratory results, in addition to the provision of complete laboratory reports and chain of custody documentation. Field observations and results for groundwater well monitoring were also adequately summarised in tables.

The site plans provided by the consultant (ERM 2021b) have been produced to scale. The figures have generally adequately identified the sampling locations relevant to the main site features such as boundaries and street frontage. Figures prepared by the consultant are included as **Appendix D.**

The laboratory procedures were generally appropriate for the identified potential contaminants of concern (PFAS) and the adopted criteria against which results were compared. A review of the laboratory reports and associated chain of custody documentation indicates that samples were received appropriately, and no discrepancies were noted.

The consultant (ERM 2021b) addressed the potential migration of the identified contaminants of concern through an assessment of groundwater, surface water and sediment across the Commonwealth land site. The conclusions reached by the consultant in relation to groundwater, surface water and sediment issues across the Commonwealth land are considered appropriate and meet the requirements of the site audit. Overall, the consultant's report (ERM 2021b) is considered to have obtained and reported results in a manner which enable conclusions to be drawn regarding the extent of contamination for the Commonwealth land site.

8. Detailed Site Investigation

Based on the range of potentially contaminating historical land uses/activities identified within the Commonwealth land and surrounding area, the consultant (ERM 2022c) considered that a DSI was required to be undertaken to assess the potential for contamination for the Bradfield City Centre site that may require remediation or site management to enable development works.

The DSI involved investigation of soil, groundwater, sediment and surface water within the Bradfield City Centre site.

8.1 Field Observations

A summary of field observations encountered during the site walkover and/or investigations conducted by the consultant (ERM 2022c) is provided below:

- The site comprised of open grass areas (adjacent to roadways) or thick vegetation and shrubs. Much of the site vegetation was reported to have been cleared in some areas to enable access for sampling.
- Signage relating to underground services was observed near unsealed access roads within the north western portion of the site indicating that services connecting the Commonwealth land site to Badgerys Creek Road were located beneath the ground surface. No fill or foreign materials were observed at the site surface in this area. The consultant reported that all on-site services were noted, by WPCA and Transport for NSW (TfNSW) contactors at the adjacent site, as being redundant.
- No evidence of ACM or anthropogenic inclusions (bricks, demolition rubble etc) were noted during the site walkover with the exception of some broken glass and ceramic fragments observed in topsoil around the former married quarters.
- The subsurface profile across the site comprised sand/clay fill to a depth of approximately 0.1 to 0.2 m bgl (maximum of 0.4 m bgl) underlain by brown and red clay with occasional grey/orange inclusions to a depth of approximately 2.5 m bgl. Anthropogenic inclusions of bitumen, glass, metal wiring, ceramics and bricks were observed in the fill material near the northern side of the bitumen access road leading to the former site compound and at one location along Moore Gully. Fine grained interbedded sandstone and shale bedrock with clay bands underlies the natural clay.
- No staining or odours were observed within fill materials during the investigation works.
- No odours or staining were identified within the natural materials during the soil investigations.
- Field headspace screening undertaken during site investigation works using a PID generally recorded results between 0 to 10 ppm with the exception of slightly elevated readings (up to 32.4 ppm) in soil sampled to 0.3 m bgl in in one testpit located near Moore Gully. While there were minor detections of diethyl phthalates (maximum of 0.7 mg/kg at 0.3 m bgl) and TRH C_{29-36} (51 mg/kg at 0.1 m bgl), as no staining, odours or other indicators of anthropogenic impact were observed within these testpit locations, the consultant considered that the slightly elevated PID readings were not indicative of potential significant anthropogenic contamination.
- Depth to groundwater was recorded between 55.28 m AHD (MW11) and 74.54 m AHD (MW08). Groundwater flow direction was inferred to flow from west to east following the slope of the site.
- Groundwater quality parameters were recorded during the groundwater monitoring event completed in June 2022 as follows:

- pH ranged from 6.73 to 7.29 indicating generally neutral conditions;
- electrical conductivity ranged from 11,688 µS/cm to 24,267 µS/cm indicating brackish/saline conditions consistent with the Bringelly Shale formation;
- dissolved oxygen ranged from 0.5 mg/L to 27.9 mg/L;
- oxidation reduction potential ranged from -69.3 mV to 11.9 mV.

- Groundwater appearance ranged from grey-brown to brown in colour and clear to turbid. Generally, there was no noticeable odour or sheen.
- Sediments comprised dark brown silty clays. No evidence of anthropogenic contamination such as odours or stains were noted during sampling.
- Surface water appearance ranged from colourless to brown in colour and clear to turbid. Generally, there was either no odour or a swampy organic odour.
- Surface water quality parameters were recorded during the sampling event completed in June 2022 as follows:
  - pH ranged from 5.70 to 7.30 indicating slightly acidic to neutral conditions;
  - electrical conductivity ranged from 77.6 µS/cm to 1,605 µS/cm indicating fresh to mildly brackish/saline conditions;
  - dissolved oxygen ranged from 0.5 mg/L to 30.0 mg/L;
  - oxidation-reduction potential ranged from -78.4 mV to 207.9 mV indicating reducing to oxidising conditions.

8.2 Soil Investigation Results

The consultant (ERM 2022c) provided summary tables (**Appendix E**) in addition to laboratory reports and chain of custody documentation for the soil investigations undertaken. A figure showing exceedances of adopted assessment criteria was also included (**Appendix D**). A summary of soil analytical results follows.

The soil investigations involved the installation of 238 testpits to a maximum depth of 2.0 m bgl and 42 soil bores to a maximum depth of 0.5 m bgl. Soil bores were installed at 19 locations where test pits had been installed but due to laboratory error, collected soil samples had not been analysed.

Analysis was undertaken for a range of CoPCs including TRH, BTEX, PAHs, SVOCs, VOCs, heavy metals and OCPs/OPPs, PFAS and asbestos.

Analytical results for heavy metals were detected below the laboratory LOR and/or adopted assessment criteria (provided in **Section 6.1**) with the exception of the following:

- Zinc exceeding the EIL for urban residential/open space land use (70 mg/kg) in samples TP21_0.1 (71 mg/kg), TP21_0.3 (97 mg/kg), TP86_0.4 (72 mg/kg), TP95_0.3 (98 mg/kg), TP101_0.1 (98 mg/kg), TP101_0.3 (72 mg/kg), TP104_0.5 (76 mg/kg), TP104_0.5 (70 mg/kg), TP108_0.1 (73 mg/kg), TP109_0.3 (86 mg/kg), TP117_0.1 (96 mg/kg), TP117_0.2 (96 mg/kg), TP121_0.1 (91 mg/kg), TP133_0.3 (78 mg/kg), TP143_0.1 (71 mg/kg), TP158_0.3 (75 mg/kg), TP170_0.1 (70 mg/kg), TP201_0.3 (75 mg/kg), TP227_0.3 (92 ,mg/kg), TP228_0.1 (86 mg/kg), TP255_0.3 (72 mg/kg), TP263_0.3 (85 mg/kg), TP264_0.1 (76 mg/kg) and TP303_0.3 (72 mg/kg);
- Zinc exceeding the EIL for commercial/industrial land use (110 mg/kg) in samples TP94_0.3 (120 mg/kg), TP123_0.1 (170 mg/kg) and TP228_0.3 (160 mg/kg);
- Nickel exceeding the EIL for urban residential/open space land use (30 mg/kg) in samples TP101_0.3 (43 mg/kg), TP108_0.1 (30 mg/kg) and TP228_0.3 (35 mg/kg);

- Nickel exceeding the EIL for commercial/industrial land use (55 mg/kg) in samples TP101_0.1 (61 mg/kg) and TP123_0.1 (57 mg/kg);
- Copper exceeding the EIL for commercial/industrial land use (85 mg/kg) in sample TP228_0.3 (100 mg/kg).

Concentrations of all other analytes were not detected above the laboratory LOR with the exception of the following:

- Sum of PFHxS and PFOS detected in TP86_0.1 (6.8 µg/kg);
- Aldrin and dieldrin detected in TP142_0.1 (0.09 mg/kg) and TP143_0.1 (0.33 mg/kg);
- Chlordane detected in TP143_0.1 (1 mg/kg);
- Diethylphthalate detected in TP90_0.1 (0.6 mg/kg), TP92_0.3 (5.6 mg/kg), TP93_0.1 (0.5 mg/kg), TP94_0.1 (0.5 mg/kg), TP94_0.3 (0.8 mg/kg), TP95_0.1 (0.6 mg/kg), TP95_0.3 (0.7 mg/kg) and TP167_0.1 (1.5 mg/kg);
- TRH C_{16}-C_{34} was detected in TP84_0.1, TP90_0.1, TP92_0.3, TP98_0.1, TP101_0.1, TP107_0.1, TP119_0.1, TP125_0.1, TP127_0.1, TP143_0.1, TP144_0.1, TP167_0.1, TP193_0.1, TP194_0.1, TP200_0.1, TP215_0.1 and TP268_0.1. Concentrations of TRH C_{16}-C_{34} were not detected above the LOR following silica gel clean-up undertaken for one sample.
- TRH C_{34}-C_{40} was detected in TP92_0.3 and TP254_0.3. Concentrations of TRH C_{34}-C_{40} were not detected above the LOR following silica gel clean-up.

8.3 Groundwater Investigation Results

The consultant (ERM 2022c) provided summary tables (**Appendix E**) in addition to laboratory reports and chain of custody documentation for the groundwater investigations undertaken. A figure showing exceedances of adopted assessment criteria was also included (**Appendix D**). A summary of groundwater analytical results follows.

The groundwater investigations involved the installation of 11 groundwater monitoring wells between depths of 6.47 m below top of casing (btoc) (MW11) and 20.0 m btoc (MW07) across the site. Groundwater samples were collected from each of the monitoring wells and analysed for PFAS, TRH, BTEX, PAHs, SVOCs, VOCs, heavy metals and OCPs/OPPs.

Analytical results for heavy metals were detected below the laboratory LOR and/or adopted assessment criteria (provided in **Section 6.1**) with the exception of the following:

- Copper exceeding the ANZG 95% protection level for fresh water (0.0014 mg/L) in all groundwater samples collected. Reported concentrations ranged from 0.002 mg/L (MW07 and MW08) to 0.01 mg/L (MW01); and
- Zinc exceeding the ANZG 95% protection level for fresh water (0.008 mg/L) in all groundwater samples collected with the exception of MW06. The maximum reported concentration was 0.17 mg/L (MW06).

Concentrations of all other analytes were not detected above the laboratory LOR with the exception of:

- Phenanthrene exceeding the ANZG 99% protection level for fresh water (0.6 µg/L) in groundwater collected from MW05 at a concentration of 1 µg/L;
- Benz(a)anthracene in MW01 and MW05 at concentrations of 2 µg/L in each well;
- Chrysene in MW05 at a concentration of 1 µg/L;

- TPH C_{10}-C_{14} concentrations of 500 µg/L and 80 µg/L were detected in groundwater sampled from monitoring wells MW01 and MW06 respectively. TRH C_{10}-C_{16} (60 µg/L) and TRH F2 (C_{10}-C_{16} minus naphthalene, 60 µg/L) were detected in groundwater sampled from monitoring well MW06. Concentrations of TPH and TRH were not detected above the LOR following silica gel cleanup.

8.4 Sediment Investigation Results

The consultant (ERM 2022c) provided a summary table (**Appendix E**) in addition to laboratory reports and chain of custody documentation for the sediment investigations undertaken.

Sediment samples were collected from 10 locations along drainage lines or overflow flow paths within the site and analysed for PFAS. Concentrations of PFAS were not detected above the laboratory LOR in any sediment samples.

8.5 Surface Water Investigation Results

The consultant (ERM 2022c) provided summary tables (**Appendix E**) in addition to laboratory reports and chain of custody documentation for the surface water investigations undertaken. A figure showing exceedances of adopted assessment criteria was also included (**Appendix D**).

Surface water samples were collected from nine locations within drainage lines. Surface water samples were co-located with sediment sample locations with the exception of sampling location SW3 along Thompsons Creek where surface water was not observed.

Surface water samples were collected and analysed for PFAS, TRH, BTEX, PAHs, SVOCs, VOCs, heavy metals and OCPs/OPPs.

Analytical results for heavy metals were detected below the laboratory LOR and/or adopted assessment criteria (provided in **Section 6.1**) with the exception of the following:

- Copper exceeding the ANZG 95% protection level for fresh water (0.0014 mg/L) in all surface water samples. Reported concentrations ranged from 0.002 mg/L (SW2) to 0.04 mg/L (SW4);
- Lead exceeding the ANZG 95% protection level for fresh water (0.0034 mg/L) in surface water collected from SW4 (0.004 mg/L);
- Nickel exceeding the ANZG 95% protection level for fresh water (0.011 mg/L) in surface water collected from SW6 (0.011 mg/L) and SW10 (0.012 mg/L); and
- Zinc exceeding the ANZG 95% protection level for fresh water (0.008 mg/L) in all groundwater samples collected with the exception of SW2. Reported concentrations ranged from 0.027 mg/L (SW7) to 0.094 mg/L (SW9).

Concentrations of all other analytes were not detected above the laboratory LOR with the exception of:

- PFOS detected at or just above the LOR in surface water collected from SW2, SW9 and SW10;
- PFHxS detected at the LOR in surface water collected from SW2;
- PFHxA and PFPeA detected just above the LOR in surface water collected from SW8;
- Total monocyclic aromatic hydrocarbons (MAHs) detected slightly above the LOR in surface water collected from SW4; and
- Toluene detected at low concentrations in surface water collected from SW4 and SW5.

8.6 Consultant's Interpretations and Conclusions

The consultant (ERM 2022b) provided the following conclusions on the soil, groundwater, sediment and surface water sampling results:

- With the exception of the isolated areas including around the former married quarters, access road to the former site compound (located within the Metro site area) and a location within Moore Gully, no evidence of staining, odours or anthropogenic inclusions such as bricks, rubble or potential ACM were noted within fill materials which were observed to extend to a maximum depth of 0.4 m bgl during site investigations. Based on the nature and identified limited extent of fill material within the site, it was considered that there is a low risk of significant burials of uncontrolled fill materials within the site with the exception of the former married quarters area.
- Natural materials were generally encountered at the surface or at depths ranging from 0.1 to 0.4 m bgl underlying fill material. No evidence of staining or odours were identified within natural materials during the soil investigations. The consistency of concentrations of heavy metals (zinc, nickel and copper) detected above the adopted EILs within fill and natural material across the site are considered likely representative of natural background conditions and not indicative of anthropogenic contamination requiring further assessment. The nature and extent of the exceedances are considered to be minor, and are unlikely to pose a risk of harm to the current or future land uses for the site.
- The minor detection of PFAS (sum of PFHxS and PFOS) below the adopted site criteria in surface soil in one sample is not considered indicative of significant or widespread PFAS contamination that requires further assessment. The consultant noted that surface materials stripping will occur as part of development of the site and risks posed to ecology are not considered likely post development.
- Given the absence of evidence of observed anthropogenic contamination and low PID screening results, the detections of TRH above the LOR in soil samples are not considered to be indicative of significant anthropogenic contamination.
- While ACM was not identified within fill materials within the area of the former Married Quarters, there is potential for ACM to be present in fill based on previously identified ACM in this area.
- Minor exceedances of concentrations of heavy metals (copper and zinc) exceeding the adopted drinking water or ANZG fresh water criteria were detected in groundwater samples. Based on the concentrations of heavy metals detected in soil samples, the slightly elevated concentrations of heavy metals are considered likely to be representative of natural background conditions and not indicative of anthropogenic contamination that requires further assessment.
- Minor concentrations of PAHs detected in groundwater sampled from MW01 and MW05 in addition to the exceedance of the 99% species protection level for phenanthrene for MW05 are not considered to pose a significant threat to ecological receptors due to the isolated nature of the exceedances.
- The concentrations of TRH detected above the laboratory LOR in groundwater samples collected from MW01 and MW06 were considered by the consultant to be minor. Based on the lack of anthropogenic hydrocarbon contamination identified during the siteworks, the results were not considered to be indicative of widespread or significant anthropogenic contamination or pose potential risks to future site receptors.

- Based on the lack of observation of anthropogenic contamination and concentrations of PFAS below the LOR in sediment sampled, the consultant considered there to be a low risk of PFAS migrating through or off-site via surface water flows.
- The consistent detection of concentrations of heavy metals above the adopted site criteria in surface water in conjunction with the detections of heavy metals in soil and groundwater across the site, and absence of a likely source is considered by the consultant to likely be representative of natural background conditions.
- The detected exceedance of the criteria for high conservation value systems for PFOS in surface water at three locations including within Moore Gully where PFAS (sum of PFHxS and PFOS) was detected above the LOR in soil, the consultant considered that there is potential for minor PFOS migration to the site from upgradient sources. Given the proposed development of the site, the consultant considered that no threats were posed to future site receptors.
- While no anthropogenic contamination was observed, previous investigations identified the potential for ACM to be present within on-site service pits/conduits and in fill at the former Married Quarters area. The implementation of an Asbestos Management Plan (AMP) is therefore required to manage the fill materials within the former married quarters area and any potential asbestos conduits that may be encountered during earthworks within the site.

Based on the field observations and findings of the soil, groundwater, sediment and surface water analytical results, the consultant (ERM 2022c) considers that the site can be made suitable for land uses under HIL-A, HIL-B, HIL-C and HIL-D (ASC NEPM) provided an appropriate AMP is implemented. The proposed development includes public open space/recreation and mixed uses including medium to high density residential, commercial, light industrial, retail, hotel, child care facilities, community and education.

8.7 Revised Conceptual Site Model

The consultant (ERM 2022c) updated the preliminary CSM based on the findings of the DSI. Risks of potentially complete potential source-pathway-receptor linkages had been considered to range between low to moderate prior to the DSI.

Following the completion of the DSI, risks of potentially complete potential source-pathway-receptor linkages were generally reduced to low or low/moderate with the exception of risks posed by asbestos conduits which remained the same.

8.8 Audit Opinion

The consultant (ERM 2022c) provided tables which adequately summarised the laboratory results, in addition to the provision of complete laboratory reports and chain of custody documentation. Summary tables prepared by the consultant are included as **Appendix D**.

The site plans provided by the consultant (ERM 2022c) adequately identified the sampling locations relevant to the main site features such as boundaries and street frontage and have been produced to scale. The auditor notes that the fill/topsoil layer presented in the figures does not accurately reflect the lack of fill encountered in select testpits. However, as the fill layer is presented as being generally shallow across the site and given the lack of contamination encountered, the discrepancy is considered not to affect the conclusions of the audit. Figures prepared by the consultant are included as **Appendix C.**

The laboratory procedures were generally appropriate for identified potential contaminants of concern and adopted criteria against which results were compared.

A review of the laboratory reports and associated chain of custody documentation indicates that samples were received appropriately. It is noted that sampling dates were not recorded on the CoC

for samples collected on 28/10/21, and the trip spike and trip blank for the sample batch collected on 22/6/22, resulting in perceived breaches of sample holding time however the consultant has confirmed that samples were analysed within recommended holding times. The auditor considers these discrepancies do not affect the dataset and overall outcome of the audit.

As part of the investigation works, the consultant (ERM 2022c) undertook appropriate assessment of aesthetic issues in accordance with EPA (2017) including contaminant odours, soil discolouration, anthropogenic material and/or presence of asbestos during soil sampling.

The consultant (ERM 2022c) addressed the potential migration of the identified contaminants of concern through an assessment of soils, groundwater, sediments and surface water across the site. The auditor notes that the central portion of the Commonwealth land (considered as 'off-site'), had been previously assessed (ERM 2021b) with further investigations undertaken separate to this audit.

The conclusions reached by the consultant in relation to soil, groundwater, sediment and surface water issues at the site are considered appropriate and meet the requirements of the site audit. Overall, the consultant report (ERM 2022c) is considered to have obtained and reported results in a manner which enables conclusions to be drawn regarding the suitability for the proposed development with the implementation of site management measures (discussed in **Section 9**) and therefore meets the requirements of the site audit.

9. Site Management During Development

9.1 Asbestos Management Plan

An Asbestos Management Plan (AMP) (ERM 2022c) has been developed for implementation during the development of the approximate 94.56 hectares site area defined as the Bradfield City Centre (part Lot 101 DP 1282949). The AMP has been prepared to document site conditions in relation to previously detected and potential ACM impacts, and provide measures for the safe management of potential ACM that may be encountered during development works and remediation/validation of site areas as required.

ACM debris was previously identified at the location of the former Married Quarters and in a stockpile located to the south of the central compound area (Aerotropolis Core Metro station site) and a cable pit within the central compound area was suspected to contain ACM (Golder 2011b). While ACM has not been identified at the site during subsequent site investigations (Western Environmental 2019 and ERM 2021a, 2022c) the potential for ACM to be present in fill material particularly in the area of the former Married Quarters remains. The DSI (ERM 2022c) concluded that the site can be made suitable for the proposed public open space/recreation and mixed use development provided that an AMP is implemented.

Based on the limited detections of ACM at the site, the consultant (ERM 2022c) anticipates that that any unexpected finds of ACM will be small in volume and limited to isolated pockets within surface fill or within service p its/conduits. The preferred management approach documented within the AMP for unexpected finds of ACM is excavation and off-site disposal. The AMP provides procedures for managing suspected ACM finds, removal of asbestos, and validation of remediated areas. Reporting requirements including validation reporting, and record keeping are outlined in the AMP.

The AMP (ERM 2022c) includes the following main provisions:

- Background, site identification and site conditions;
- Stakeholders and responsibilities;
- Statutory requirements including applicable codes of practice for asbestos removal;
- Management measures and procedures including the following:
  - Suspected ACM identification;
  - Asbestos removal;
  - Personal and equipment/vehicle decontamination;
  - Asbestos clearance and /or validation; and
  - Reporting and AMP auditing.

Any amendments to the AMP are required to undertaken by a suitably qualified environmental professional and approved by an EPA accredited Site Auditor.

Should large volumes of ACM impacted fill be identified during construction works that would result in significant costs for off-site disposal then on-site containment of impacted soils may be considered as an asbestos management option for the site. The consideration of on-site containment and the design of the containment cell would be required to be approved by an EPA accredited Site Auditor.

9.2 Audit Opinion

The AMP prepared by the consultant (ERM 2022c) is considered by the auditor to be consistent with the requirements of EPA (2017), with the following noted:

- The AMP suitably details the framework for the management of potential risks associated with asbestos in soil during redevelopment of the site for the proposed range of land uses at the site which includes commercial/industrial land use, medium and high density residential, educational, community, retail, hotel and childcare land uses.
- The adopted approach for the management of ACM finds involves off-site disposal of contaminated fill. With consideration to the nature and extent of the previously identified ACM impacts in isolated locations, the auditor accepts the adopted approach to be appropriate and consistent with relevant NSW EPA guidance.
- The auditor notes that the nominated validation sampling methodology and frequency nominated by the consultant is suitable and meets the requirements of the audit. The auditor notes that sampling will be required to be completed in accordance with the requirements of the NEPM 2013.
- The validation criteria nominated by the consultant (ERM 2022c) are suitable for the proposed uses of the site.
- The auditor notes that a validation report should include, but not be limited to, additional site information including photos, tabulated results, waste disposal documentation and copies of relevant notifications and licences.
- Any revisions to the AMP that result in changes to site management requirements, such as on-site containment of asbestos impacted soils, are to be approved by an accredited site auditor. The adoption of on-site containment in a constructed cell may require a separate SAS and associated SAR to meet planning considerations.

The adopted asbestos management approach presented in the AMP (ERM 2022c) was checked by the auditor and found to be:

- Technically feasible;
- Environmentally justifiable given the nature and extent of the identified potential contamination; and
- Consistent with relevant laws, policies and guidelines, since the works are proposed to be undertaken in a manner which do not appear will result in any relevant regulatory measures being breached.

Overall, the auditor considers that the proposed unexpected finds asbestos management and validation work process, as detailed in the AMP (ERM 2022c), meets the requirements of the site audit. The AMP is attached to this Site Audit Report (**Appendix G**) and also to the Site Audit Statement.

10. Evaluation of Land Use Suitability

In assessing the suitability of a site for an existing or proposed land use in an urban context, the decision process for assessing urban redevelopment sites should be followed (Appendix A, EPA 2017), as discussed in the following sections.

This audit was undertaken with the objective of independently reviewing the site investigation reports (ERM 2021b and 2022c) to determine whether the nature and extent of contamination at the site has been appropriately determined and to determine if the land can be made suitable for the proposed public open space,/recreation, commercial/industrial land use, medium and high density residential, educational, community, retail, hotel and childcare land uses development.

10.1 Reporting in accordance with EPA requirements

The documents provided by the consultant have been checked against, and meet the requirements of EPA 2020a. As such, the reporting of the site investigation process and proposed site management/validation process are considered to be appropriate and meet the requirements of this audit.

10.2 Aesthetic issues have been adequately addressed

Aesthetic issues including assessment of contaminant odours, soil discolouration, anthropogenic material and presence of asbestos was undertaken. As such, aesthetic issues in relation to site soils are considered by the auditor to have been adequately addressed.

10.3 Soils have been assessed against the appropriate health-based investigation levels

The criteria adopted by the consultant for the soil investigation works were checked against, and are consistent with, appropriate health-based criteria approved by the EPA for the identified land uses.

Groundwater investigation was undertaken as part of the DSI and as such, the potential for migration of contamination from soils to groundwater has been considered.

10.4 Groundwater has been assessed against the appropriate health-based investigation levels

The criteria adopted by the consultant in the assessment of groundwater have been checked against, and are consistent with, appropriate health-based criteria approved by the EPA.

10.5 Hazardous ground gases have been assessed against the appropriate investigation levels

The preliminary site investigations involving site history review and intrusive investigations did not identify contamination indicating requirement for intrusive ground gas assessment at the site. Assessment of ground gases was therefore not undertaken at the site.

10.6 Background soil concentrations have been adequately addressed

During the site investigation works, the consultant sampled in natural formations, providing a clear representation of local natural soil profiles. As such, background soil concentrations are considered to have been adequately addressed.

10.7 All impacts of chemical mixtures have been assessed

No issues relating to chemical mixtures in relation to the identified contaminants of concern were identified by the consultant. Hence, there was no requirement to give any further consideration to the impact of chemical mixtures.

10.8 Any potential ecological risks have been assessed

Soil and sediment assessment criteria were based on EPA approved ESLs and EILs. Groundwater investigation levels were based on EPA approved criteria including ANZG 2018 which incorporate provisions for the protection of species in aquatic ecosystems.

Based on the overall concentrations of heavy metals detected in soil and groundwater samples across the site, the slightly elevated concentration detected above the EILs are considered to be representative of natural background conditions.

As such, ecological risks for site are considered to have been appropriately assessed as part of the site audit.

10.9 Contaminant migration (actual or potential) has been addressed

The consultant addressed both the potential and actual migration of the identified contaminants of concern through an assessment of site history, site setting, soil, groundwater, sediment and surface water across the site.

Based on the absence of any identified complete source pathway receptor linkages, the requirements of the site audit in relation to consideration of contaminant migration have been met.

10.10 Site Management Strategy is Appropriate

While ACM was not identified within soils at the site during the DSI, the implementation of an AMP (ERM 2022c) is required during development of the site to manage any unexpected finds due to previously identified ACM within the former Married Quarters.

In accordance with the requirements of EPA 2017, the site management strategy outlined in the AMP (ERM 2022c) is considered to be:

- technically feasible;
- environmentally justifiable; and
- consistent with relevant laws, policies and guidelines.

On this basis, the Auditor accepts that the proposed site management strategy is appropriate and, if implemented appropriately, will make the site suitable for the proposed public open space/recreation and mixed uses including medium to high density residential, commercial/industrial, retail, hotel, child care facilities, community and education.

11. Audit Summary Opinion

On the basis of the findings of the site audit, and subject to the limitations in **Section 12**, the following summary opinions are provided:

- The site investigation works (ERM 2021b and ERM 2022c) are considered to have met the requirements of the *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd Edition)* (EPA 2017).
- The soil investigations identified elevated concentrations of heavy metals above the adopted EILs in shallow fill or natural material which are considered representative of natural background conditions and unlikely to pose risks for current or future land uses. Similarly, concentrations of heavy metals exceeding the adopted site criteria detected in groundwater and surface water samples are not considered to be indicative of anthropogenic impacts and do not require further assessment.
- Assessment of groundwater conditions did not identify levels of the identified contaminants of potential concern in groundwater which are considered to require remediation or management under the proposed uses.
- Assessment of surface water and sediment conditions did not identify levels of the identified contaminants of potential concern which are considered to require management under the proposed uses.
- While ACM was not identified at the site during the recent site investigations (ERM 2021b and 2022c), there is potential for asbestos impact to exist in fill materials (particularly around the former Married Quarters) and in on-site service pits/conduits. Implementation of an AMP is required during development of the site to manage any unexpected finds.
- Consideration of aesthetic issues including staining, odours, anthropogenic contaminants and presence of asbestos has been adequately addressed in the assessment of soils at the site.
- The AMP (ERM 2022c) prepared for the site addresses the identified contamination issue; with the site management approach documented in the AMP checked by the auditor and found to be: technically feasible; environmentally justifiable given the nature and extent of the identified potential contamination; and consistent with relevant laws, policies and guidelines.
- The auditor notes that the site management and validation procedures outlined in the AMP (ERM 2022c) are considered appropriate to make the site suitable for the proposed public open space/recreation and mixed uses including medium to high density residential, commercial/industrial, retail, hotel, child care facilities, community and education, subject to the following requirements:
    - Any amendments to the AMP that result in changes to site management will be required to be reviewed and endorsed by the site auditor prior to implementation.
    - Appropriate supervision by an Environmental Consultant and / or Occupational Hygienist during any asbestos management works.
    - A validation report is prepared in accordance with relevant EPA requirements confirming the suitability of the site for the intended landuses prior to occupation of the site.

12. Limitations

This audit was conducted with a reasonable level of scrutiny, care and diligence on behalf of the client for the purposes outlined in the *Contaminated Land Management Act 1997*. The data used to support the conclusions reached in this audit were obtained by other consultants and the limitations which apply to the consultant's report(s) apply equally to this audit report.

Every reasonable effort has been made to identify and obtain all relevant data, reports and other information that provide evidence about the condition of the site, and those that were held by the client and the client's consultants, or that were readily available. No liability can be accepted for unreported omissions, alterations or errors in the data collected and presented by other consultants. Accordingly, the data and information presented by others are taken and interpreted in good faith.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations reviewed, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this audit are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G and the Site Auditor reserve the right to review the report in the context of the additional information, subject to meeting relevant guideline requirements imposed by the EPA.

Appendix A Guidelines made or approved by the EPA

Guidelines made or approved by the EPA (s.105 CLM Act 1997)

Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia (ANZG 2018)

Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Volume 3, Primary Industries – Rationale and Background Information, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, 2000 (ANZECC & ARMCANZ 2000)

Australian Drinking Water Guidelines, National Health and Medical Research Council and Agriculture and Resource Management Council of Australia and New Zealand, 2011 (NHMRC/NRMMC 2011)

Composite Sampling, Lock, W. H., *National Environmental Health Forum Monographs, Soil Series No.3,* 1996, SA Health Commission, (NEHF 1996)

Contaminated Sites: Guidelines for the Vertical Mixing of Soil on Former Broad-Acre Agricultural Land, NSW EPA, 1995 (EPA 1995)

Contaminated Sites: Guidelines for the Assessment and Clean Up of Cattle Tick Dip Sites for Residential Purposes, NSW Agriculture and CMPS&F Environmental, February 1996 (NSW Agriculture and CMPS&F Environmental 1996)

Contaminated Sites: Guidelines for Assessing Banana Plantation Sites, NSW EPA, 1997 (EPA 1997b)

Contaminated Sites: Guidelines for Assessing Former Orchards and Market Gardens, NSW EPA, 2005 (EPA 2005)

Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination, NSW EPA, March 2007 (EPA 2007)

Contaminated Sites: Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997, NSW EPA, September 2015 (EPA 2015)

Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd Edition), NSW EPA, 2017 (EPA 2017)

Consultants Reporting on Contaminated Land: Contaminated Land Guidelines, NSW EPA, May 2020 (EPA 2020a)

Assessment and Management of Hazardous Ground Gases: Contaminated Land Guidelines, NSW EPA, May 2020 (EPA 2020b)

Contaminated Land Guidelines: Sampling Design Part 1: Application, NSW EPA, 2022 (EPA 2022a)

Contaminated Land Guidelines: Sampling Design Part 2: Interpretation, NSW EPA, 2022 (EPA 2022b)

Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards, Department of Health and Ageing and EnHealth Council, Commonwealth of Australia, June 2012 (EnHealth 2012)

National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 2013, National Environment Protection Council (NEPC 2013)

Appendix B Audit Correspondence

From:	Christine Louie
To:	Sean Porter
Cc:	Andrew Lau
Subject:	Stage 1 Aerotropolis Core Precinct - Auditor Review of PSI and SAQP
Date:	Wednesday, 19 May 2021 3:27:00 PM
Attachments:	image001.png

Hi Sean,

Please find below site auditor review of the ERM PSI and SAQP for detailed site investigation (noting that complete versions of the documents were not available).

The site auditor has reviewed the following reports:

- *Aerotropolis Core Precinct Review of Contamination Issues*. Rev 2, 4 February 2021. ERM (2021a)
- *Aerotropolis Core Precinct Sampling and Analysis Quality Plan*. Rev 1, 9 February 2021. ERM (2021b)

Review of the above reports has been undertaken by the site auditor against the requirements of the relevant guidelines made or approved by the NSW EPA.

Aerotropolis Core Precinct Review of Contamination Issues (ERM 2021a)

a. General – appendices including figures, tables, desktop search results, site photographs, potential remedial/site management costs and laboratory certificates were not provided to the site auditor.
b. Executive Summary – an executive summary as required by NSW EPA (2020) was not included.
c. Section 2 Site Identification – Stage 1 of the Aerotropolis Core is understood to also comprise parcels of land to the east and south of the former RAAF Bringelly Radio Receiving Station (Lot 10 DP 1235662). Please review the site area and amend the site address and lot and deposited plan details to include all parcels of land comprising the site. Please confirm the zonings for the various areas of the site. Please clarify if the proportion of lands zoned SP2 – Infrastructure is 5% (as calculated from zoning provided) or less. The geographic co-ordinates of the site should identify the extents of the site area not central location.
d. Section 3 Site Setting – see above comment on site area and amend relevant details of this section. Please clarify if the slope of the local area is upwards not downwards to the north west.
e. Section 4 Site History – the site history in this section covers only the former RAAF Bringelly portion of the site. Is the site history (titles and aerial photography) to be updated with information for the privately owned lands? What was the search buffer area for the historical business records search?
f. Section 5 – there is no section 5 for the report.
g. Section 6.3 NSW EPA Licenced Activities – EPL number 20864 has been surrendered.
h. Section 6.4 Delicenced and/or Surrendered Licences Premises still Regulated by EPA, Licences Surrendered, Clean Up and Penalty Notices - were all the surrendered herbicide application licences applicable to the site? Surrendered licence numbers 11354 and 20864 should be included in the list.

i. Section 6.8 NSW State Environmental Planning Policy – State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 applies to the site and surrounding areas.
j. Section 7 Previous Investigations – a copy of the *Cost Estimate Report – 215 Badgerys Creek Road, Bringelly NSW* (Thuroona 2019) has not been made available to the auditor.
k. A sampling, analysis and quality plan as required by NSW EPA (2020) has not been included for the PFAS sampling program undertaken as part of the site investigation works documented.
l. Section 10. State the Problem - while it is stated that additional assessment was undertaken to assess potential temporal variations in PFAS concentrations, this DQO does not appear to be stated clearly as soil sampling was not undertaken although there is reference to soil contamination risks in Step 2 and Step 5. Please clarify why soil sampling was not undertaken as part of the PFAS investigations.
m. Section 11.6 Groundwater, Surface Water and Sediment Investigation – the surface water/sediment sampling locations included additional locations not sampled during the Western Environmental (2019) PFAS investigation. Please provide the rationale for the additional sampling locations as Section 10.1 states that the targeted assessment relates to the assessment of PFAS from previously sampled locations only.
n. Section 13.1 Potential Sources of Contamination – the previous site investigations undertaken at the site (Golder 2011 and Western Environmental 2019) have targeted the potential sources of contamination for the identified CoPCs with the exception of the septic tank (nutrients, nitrates/nitrates (sic), pathogens), soak pit/chemical storage (OCP/OPP), asbestos service pits/conduits (asbestos), unexpected finds and adjacent residential dwellings. The results of the previous site investigations should be taken into consideration for future sampling programs at the overall site.
o. Section 13.1 Potential Receptors – key receptors should include future residential users and ecological receptors for the site.
p. Section 13.4 Conceptual Site Model – identified asbestos surface impact at the former Married Quarters was investigated by Western Environmental (2019) with no surface ACM or asbestos in soils identified. The risk of potentially complete pollutant linkages are generally unlikely to be moderate to high if asbestos management measures are in place. ACM/asbestos is generally not considered to pose risks to ecological receptors. PFAS was investigated at targeted and grid locations across the former RAAF Bringelly site by Western Environmental (2019), the results of which should be taken into consideration. As the rural residential lands that comprise a significant proportion of the site have not been investigated, the risks of potentially complete pollutant linkages would therefore be similar to that posed by unexpected finds/buried waste/fill materials for the former RAAF Bringelly site area. Please review the CSM and amend accordingly.
q. Section 15 Conclusions and Recommendations – please amend in accordance with revisions to the remainder of the report.

<u>Aerotropolis Core Precinct Sampling and Analysis Quality Plan (ERM 2021b)</u>

a. The auditor has issued L001 Interim Audit Advice 001 Literature Review of Previous Investigation Reports (dated 14 May 2021). Please refer to relevant comments on future site investigations and incorporate into the SAQP.
b. General – figures were not provided to the site auditor. Refer to relevant comments on ERM (2021a) including but not limited to site identification, site setting, conceptual site model and summary of findings from the ERM (2021a referred to as the PSI, and amend

accordingly.

c. Section 6 Data Quality Objectives – the site area to be investigated is required to be clearly identified. Should the investigation area not include the land outside of the former RAAF Bringelly site then the whole of Stage 1 of the Aerotropolis Core Precinct cannot be considered to be assessed. The sampling strategy makes reference to 'adjacent landfill/railway infrastructure' that may have impacted the site – no mention has been made of these potential sources of contamination in the site history or surrounding area uses. Please provide background information for this source of contamination.
d. Section 7 Investigation Methodology – as figures showing the sampling locations have not been provided, it is unclear whether the proposed locations coincide with previous sampling locations and whether the overall sampling density meets NSW EPA (1995) requirements. Are the testpits proposed under task 8 testpitting/stockpile and gully assessment in addition to the 100 soil bores listed under task 7?
e. Section 7.5 Anticipated Analytical Schedule – assessment of historical herbicide application at the site should be included in the analytical schedule.
f. Section 8.1 PFAS Specific Assessment Criteria – please clarify the references to AEC 7 and Newcastle House.

Revised complete versions of the above documents are required to be submitted for review by the auditor prior to the commencement of detailed site investigation.

Regards,
Christine

-

Christine Louie | Principal | JBS&G
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Contaminated Land | Groundwater Remediation | Assessment and Approvals | Auditing and Compliance | Hygiene and Hazardous Materials | Due Diligence and Liability | Fire Management Planning | Stakeholder and Risk Management

JBS&G acknowledges the Traditional Owners and custodians on the land we walk, work and live. We pay respect to their cultures, Elders past and present, and in the spirit of reconciliation, we commit to working together for our shared future.

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From:	Christine Louie
To:	Ian Batterley; Sean Porter
Cc:	Andrew Lau; Peter Lavelle; Paul.Hedge@wpca.sydney
Subject:	RE: Aerotropolis Core Precinct Commonwealth Land SAQP - Auditor Comments
Date:	Thursday, 8 July 2021 1:28:00 PM
Attachments:	image001.png

Hi Sean and Ian,

The auditor has reviewed *Aerotropolis Core Precinct – Commonwealth Land Sampling and Analysis Quality Plan* Final V2 Rev 02, 8 July 2021 (ERM 2021).

While it is acknowledged that the proposed soil sampling density does not meet that stated in Table A NSW EPA (1995), the proposed soil sampling program developed using Visual Sample Plan (US Department of Energy) (output provided via email, I Batterley dated 7/7/21) is designed to detect a hotspot of approximately 30 m radius with 95% confidence level which meets the objectives of Table A of NSW EPA (1995).

The revised SAQP and associated responses from ERM have therefore sufficiently addressed the auditor's comments and the above document can be considered final.

Regards,
Christine

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From: Ian Batterley <Ian.Batterley@erm.com>
Sent: Thursday, 8 July 2021 11:51 AM
To: Christine Louie <clouie@jbsg.com.au>; Sean Porter <Sean.Porter@wpca.sydney>
Cc: Andrew Lau <ALau@jbsg.com.au>; Peter Lavelle <Peter.Lavelle@erm.com>; Paul.Hedge@wpca.sydney
Subject: RE: Aerotropolis Core Precinct Commonwealth Land SAQP - Auditor Comments

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

Hi all

Following from emails last night, please find the updated SAQP including the additional wells

requested by the Site Auditor

Please note that we have not adjusted the sampling density to meet NSW EPA criteria a per the below email

Thanks and regards

Ian

From: Ian Batterley
Sent: Wednesday, July 7, 2021 7:23 PM
To: Christine Louie <clouie@jbsg.com.au>; Sean Porter <Sean.Porter@wpca.sydney>
Cc: Andrew Lau <ALau@jbsg.com.au>; Peter Lavelle <Peter.Lavelle@erm.com>; Paul.Hedge@wpca.sydney
Subject: RE: Aerotropolis Core Precinct Commonwealth Land SAQP - Auditor Comments

Hi Christine / Andrew

Please find the attached same design output for the justification of test pit locations. Please note that as outlined in Section 6.7 the sampling density does not meet the NSW sampling density criteria however it is the opinion of ERM that the proposed density is sufficient based on the below

- *"While ERM notes that the proposed sampling density is less than the density detailed within the NSW Sampling Density guidance, based on the below approach, the proposed sampling density (~57m grid) will enable identification of a hotspot with 30m radius"*

It is the opinion of ERM that due to the nature of the proposed development (large blocks), the potential CoPCs within the wider site area and the 95% confidence in detecting a 30m hotspot, this proposed density is sufficient to characterize the Site.

Please note however that the requested additional groundwater wells will be included within the SAQP

Please let me know if you require any additional information

Regards

Ian

From: Ian Batterley
Sent: Wednesday, July 7, 2021 7:14 PM
To: Christine Louie <clouie@jbsg.com.au>; Sean Porter <Sean.Porter@wpca.sydney>
Cc: Andrew Lau <ALau@jbsg.com.au>; Peter Lavelle <Peter.Lavelle@erm.com>; Paul.Hedge@wpca.sydney
Subject: RE: Aerotropolis Core Precinct Commonwealth Land SAQP - Auditor Comments

Thanks Christine / Andrew

I'm making all require updates now – we will send the final version tomorrow

Thanks

Ian

From: Christine Louie <clouie@jbsg.com.au>
Sent: Wednesday, July 7, 2021 5:41 PM
To: Ian Batterley <Ian.Batterley@erm.com>; Sean Porter <Sean.Porter@wpca.sydney>
Cc: Andrew Lau <ALau@jbsg.com.au>; Peter Lavelle <Peter.Lavelle@erm.com>; Paul.Hedge@wpca.sydney
Subject: RE: Aerotropolis Core Precinct Commonwealth Land SAQP - Auditor Comments

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Hi Sean and Ian,

The auditor has reviewed *Aerotropolis Core Precinct – Commonwealth Land Sampling and Analysis Quality Plan* Rev 02, 7 July 2021 (ERM 2021).

The auditor comments on rev 1 of the SAQP have been addressed satisfactorily except for the comments on section 6.7 and section 7.

No information has been provided on the Visual Sample Plan software used to support the sampling density of installation of 321 testpits across 97 hectares. Please provide sufficient justification as to how the proposed sampling density meets the NSW EPA guidelines (1995).

Rationale for location of sediment and surface water samples does not appear to have been provided (at least not in s6.7 or s7) although the locations appear to be the same as previous investigations so appear acceptable.

Rationale for six groundwater monitoring wells is '*general grid based pattern*' with the wells located only in the southern portion of the site. It is suggested at least 1 location in NW (green shaded), 1 location in west near boundary (pink shaded) and 3 in east (orange shaded) be installed (refer to shading in figure F5).

Please amend the SAQP to address the above prior to commencement of site investigations.

Regards,
Christine

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From: Ian Batterley <Ian.Batterley@erm.com>
Sent: Wednesday, 7 July 2021 2:29 PM
To: Christine Louie <clouie@jbsg.com.au>; Sean Porter <Sean.Porter@wpca.sydney>
Cc: Andrew Lau <ALau@jbsg.com.au>; Peter Lavelle <Peter.Lavelle@erm.com>; Paul.Hedge@wpca.sydney
Subject: RE: Aerotropolis Core Precinct Commonwealth Land SAQP - Auditor Comments

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

Hi team

Please find the attached updated SAQP addressing site auditor comments below

Hope all is well

Ian

From: Christine Louie <clouie@jbsg.com.au>
Sent: Tuesday, July 6, 2021 9:45 AM
To: Sean Porter <Sean.Porter@wpca.sydney>; Ian Batterley <Ian.Batterley@erm.com>
Cc: Andrew Lau <ALau@jbsg.com.au>; Peter Lavelle <Peter.Lavelle@erm.com>; Paul.Hedge@wpca.sydney
Subject: Aerotropolis Core Precinct Commonwealth Land SAQP - Auditor Comments

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Sean and Ian,

The site auditor has reviewed the following document:

- *Aerotropolis Core Precinct – Commonwealth Land Sampling and Analysis Quality Plan*. Draft Rev 01, 2 July 2021. ERM (2021)

Review of the above document has been undertaken by the site auditor against the requirements of the relevant guidelines made or approved by the NSW EPA.

a. General – please clarify whether the site area is now referred to as Bradfield City Centre or Aerotropolis Core.
b. Section 2 Site Identification – a portion of the site in the north west (excluding Priority Area 1) is zoned ENT Enterprise and has been omitted from the zoning description. Site co-ordinates should be provided for the site area which border the excluded areas of the

Commonwealth Land in order to define the site subject to audit.

c. Section 3 Site Setting – The second bullet point under Current Land-use should be moved to the next table row Surrounding Land Use. Surface water bodies are understood to also include two unnamed tributaries of Thompsons Creek that occur within the Commonwealth Land which are relevant to the site hydrology.
d. Section 6.7 Step 7 – Optimise the Design for Obtaining Data – please provide justification how the number of testpits/soil sample locations meet the NSW EPA Sampling Design Guidelines requirements.
e. Section 7 Investigation Methodology – please confirm the total number of soil sampling location and that the overall sampling density meets NSW EPA (1995) requirements. Please provide the rationale for the locations of the groundwater wells and sediment/surface water locations e.g. upgradient/downgradient locations, drainage lines, previous investigation locations?

Please provide a revised of the SAQP for review by the auditor prior to the commencement of detailed site investigation.

Regards,
Christine

-
-

Christine Louie | Principal | JBS&G
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Contaminated Land | Groundwater Remediation | Assessment and Approvals | Auditing and Compliance | Hygiene and Hazardous Materials | Due Diligence and Liability | Fire Management Planning | Stakeholder and Risk Management

JBS&G acknowledges the Traditional Owners and custodians on the land we walk, work and live. We pay respect to their cultures, Elders past and present, and in the spirit of reconciliation, we commit to working together for our shared future.

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From: Nicholas Grbich
To: Christine Louie
Cc: Ian Batterley; Jack Emblen; Paul Hedge; Ronald Hirst; Andrew Lau
Subject: RE: WPCA - Bradfield - Revised Sampling Plan
Date: Wednesday, 8 December 2021 3:18:56 PM
Attachments: image001.png
image003.png
image004.png
image007.png
F1_0571466s_DSIBCC_G001_R0.pdf

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

Hi Christine,

Those locations were switched to red in error. Please see attached update plan. Please note that this figure is in draft, testing locations are subject to change once GPS coordinates have been validated.

Kind regards,

Nicholas Grbich
Senior Environmental Scientist

ERM
Level 15 | 309 Kent Street | Sydney NSW 2000
T +61 2 8586 8776 | **M** +61 415 833 925
E Nicholas.Grbich@erm.com | **W** www.erm.com

ERM The business of sustainability

From: Christine Louie <clouie@jbsg.com.au>
Sent: Friday, December 3, 2021 12:03 PM
To: Nicholas Grbich <Nicholas.Grbich@erm.com>
Cc: Ian Batterley <Ian.Batterley@erm.com>; Jack Emblen <Jack.Emblen@erm.com>; Paul Hedge <Paul.Hedge@wpca.sydney>; Ronald Hirst <Ron.Hirst@wpca.sydney>; Andrew Lau <ALau@jbsg.com.au>
Subject: RE: WPCA - Bradfield - Revised Sampling Plan

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Hi Nick,

The revised sampling locations plan is acceptable to the site auditor.

However, it is noted that the updated proposed sampling locations plan shows a number of testpit locations previously shown in black and understood as having already been sampled from within the identified heritage areas. Please clarify whether these locations have already been sampled and amend the figure as appropriate.

Please note that the remaining proposed testpit locations where sampling cannot be undertaken during the current assessment works will be required to be documented in the RAP as a data gap and addressed at a later stage when access to the site area is available.

Regards,
Christine

Christine Louie | Principal | JBS&G
Sydney | Melbourne | Adelaide | Perth | Brisbane | Canberra | Darwin | Wollongong |Bunbury | Hobart
Level 1, 50 Margaret Street Sydney NSW 2000
T: 02 8245 0300 | M: 0423 539 373 | E: clouie@jbsg.com.au | W: www.jbsg.com.au

Contaminated Land | Groundwater Remediation | Approvals and Assessments | Auditing and Compliance | Hygiene and Hazardous Materials | Due Diligence and Liability | Fire Management Planning | Stakeholder and Risk Management

From all the JBS&G team, we wish you a safe and happy Christmas and thank you for your continued support. **Our office will be closed from Thursday 23rd December 2021 and reopen on Wednesday 5th January 2022.** We look forward to working with you again in the new year.

JBS&G acknowledges the Traditional Owners and custodians on the land we walk, work and live. We pay respect to their cultures, Elders past and present, and in the spirit of reconciliation, we commit to working together for our shared future.

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From: Nicholas Grbich <Nicholas.Grbich@erm.com>
Sent: Friday, 3 December 2021 9:59 AM
To: Andrew Lau <ALau@jbsg.com.au>; Christine Louie <clouie@jbsg.com.au>
Cc: Ian Batterley <Ian.Batterley@erm.com>; Jack Emblen <Jack.Emblen@erm.com>; Paul Hedge <Paul.Hedge@wpca.sydney>; Ronald Hirst <Ron.Hirst@wpca.sydney>
Subject: WPCA - Bradfield - Revised Sampling Plan

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

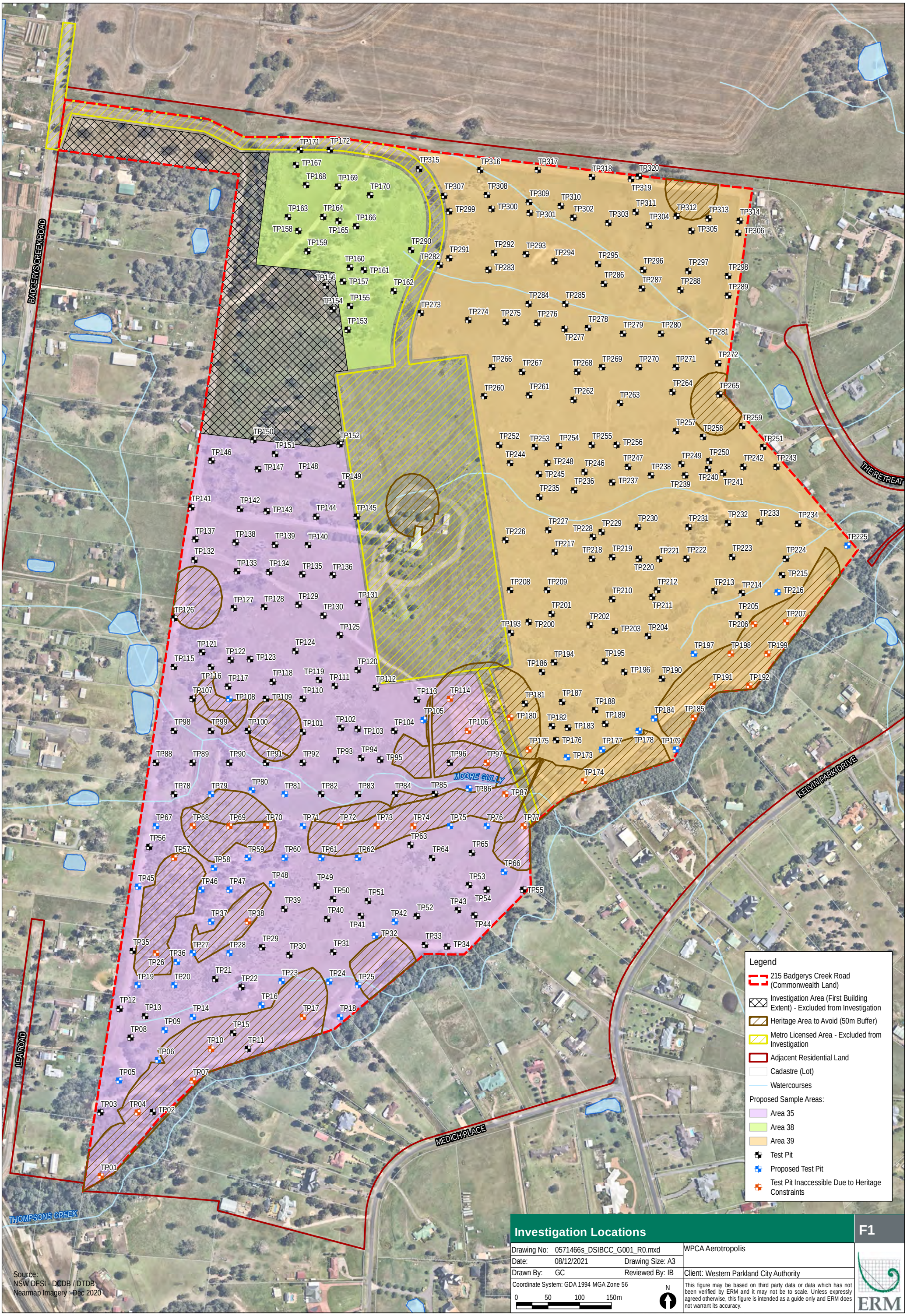
Hi Andrew and Christine,

Following our meeting on Wednesday, please find attached the updated proposed sampling plan with allowances made for areas inaccessible due to heritage constraints.

Kind regards,

Nicholas Grbich
Senior Environmental Scientist

ERM
Level 15 | 309 Kent Street | Sydney NSW 2000
T +61 2 8586 8776 | **M** +61 415 833 925



Investigation Locations

F1

Drawing No: 0571466s_DSIBCC_G001_R0.mxd		WPCA Aerotropolis
Date: 08/12/2021	Drawing Size: A3	
Drawn By: GC	Reviewed By: IB	Client: Western Parkland City Authority
Coordinate System: GDA 1994 MGA Zone 56		This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM

From:	Christine Louie
To:	Nicholas Grbich
Cc:	Paul Hedge; Ronald Hirst; Ian Batterley; Peter Lavelle; Andrew Lau; Jack Emblen
Subject:	RE: WPCA Bradfield City Centre - DSI
Date:	Thursday, 15 September 2022 4:52:00 PM
Attachments:	image004.png image007.png image008.png image012.png Audit reponse table_v1.0_Auditor comments 150922.pdf Audit reponse table_v1.0_Auditor comments 150922.xlsb image001.png image002.png

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Hi Nicholas,

The auditor has reviewed the revised report Detailed Site Investigation Bradfield City Centre, rev 3, 9/9/22 and the responses provided to the auditor comments on revision 2.

Please see the auditor's comments on the revised DSI in the attached comments table.

Regards,
Christine

Christine Louie | Principal | JBS&G
Gadigal Country | Level 1, 50 Margaret St, Sydney, NSW
T: 02 8245 0300 | M: 0423 539 373 | E: clouie@jbsg.com.au | W: jbsg.com.au | L: Conditions and Limitations
.
Exceptional Outcomes

From: Nicholas Grbich <Nicholas.Grbich@erm.com>
Sent: Friday, 9 September 2022 5:43 PM
To: Andrew Lau <ALau@jbsg.com.au>; Christine Louie <clouie@jbsg.com.au>
Cc: Paul Hedge <Paul.Hedge@wpca.sydney>; Ronald Hirst <Ron.Hirst@wpca.sydney>; Ian Batterley <Ian.Batterley@erm.com>; Peter Lavelle <Peter.Lavelle@erm.com>; Jack Emblen <Jack.Emblen@erm.com>
Subject: RE: WPCA Bradfield City Centre - DSI

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

Hi Andrew and Christine,

The DSI has been updated in response to your comments and been issued as a preliminary final. I have also attached a comments response register available with the report for download at the link below. Once all comments are closed out we will issue the report as final.

https://theermgroup-my.sharepoint.com/:f:/g/personal/nicholas_grbich_erm_com/EhX-NoYh159Ds1lMR2hvA8YBymotKxyKj4GI2r7mcRAZGQ?e=bJ41XD

Have a good weekend!

Kind regards,

Nicholas Grbich
Senior Environmental Scientist - CEnvP

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From: Christine Louie <clouie@jbsg.com.au>
Sent: Tuesday, August 23, 2022 3:11 PM
To: Nicholas Grbich <Nicholas.Grbich@erm.com>
Cc: Paul Hedge <Paul.Hedge@wpca.sydney>; Ronald Hirst <Ron.Hirst@wpca.sydney>; Ian Batterley <Ian.Batterley@erm.com>; Peter Lavelle <Peter.Lavelle@erm.com>; Jack Emblen <Jack.Emblen@erm.com>; Andrew Lau <ALau@jbsg.com.au>
Subject: RE: WPCA Bradfield City Centre - DSI

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Hi Nicholas,

The site auditor has reviewed the following document:

- *Detailed Site Investigation Bradfield City Centre*. Draft Rev 02, 11 August 2022. ERM (2022)

Review of the above document has been undertaken by the site auditor against the requirements of the relevant guidelines made or approved by the NSW EPA. Auditor comments are provided below:

a. Executive Summary – please amend in accordance with changes to the rest of the report.
b. Section 1.1 Introduction – please clarify the boundaries of the 'Site' that is the subject of the DSI. Are the Metro access roads in the northern and eastern portions of the site included? These portions are not marked as excluded from the 'Site' however the geographic co-ordinates defining these roads are listed as being under the Metro Licensed Area, which was excluded from the DSI, on Figure F3. Please amend the reference to the current layout of the Site as Figure F2 noting that the layout of the former RAAF radio receiving station shown has now been demolished.
c. Section 1.2 Background – the 'Site' and 'Commonwealth Land' have been used interchangeably. Please review and amend references to the site that is the subject of the DSI accordingly. See above comments on the figure showing the site area.
d. Section 1.5 Regulatory Requirements – the WA DoH asbestos guidelines were updated in 2021.
e. Table 2.1 Site Identification Details – please check the lot and DP for the site as the former RAAF site is listed as Lot 101 in DP 128949 on ePlanning Spatial Viewer (nsw.gov.au). The zoning map provided in Appendix H is sourced from the State Environmental Planning

Policy (Precincts – Western Parkland City) 2021 not the 2020 SEPP for the Western Sydney Aerotropolis. See above comments on the inclusion of the Metro access roads as part of the site.

f. Table 2.2 Site Identification Details – when were the Radio Receiving Station buildings demolished and was sampling of the Metro access roads (which form part of the site included in the DSI?) undertaken when waste materials were removed? See comments above on the inclusion of the Metro access roads as part of the site. Please clarify where the site elevation information has been gathered as the elevations do not correlate with the data presented in Appendix H Groundwater Well Survey which measured top of casing RLs between 60.949 m AHD (MW11 located in the east) and 84.943 m AHD (MW03 BLD1 located in the north west). The site elevations presented in Table 2.2 do not indicate a slope to the south-east, as stated under topography. Site geology should be updated with observations from the site investigations undertaken in 2021/2.
g. Section 3 Previous Investigations – please provide the full references for the previous ERM reports as they are referenced throughout the DSI report variously as ERM 2021, and the references to ERM reports should be checked for consistency. The First Building Area DSI is listed as a previous report but it is noted that the DSI report was prepared after the 2021 PSI and therefore not used to provide background information for the PSI.
h. Table 3.1 Summary of Previously Identified Contamination – please amend the locations discussed to include the DSI site and off-site as being the Metro area/s.
i. Section 4.4 Step 4 – Define the Study Boundaries – please reference the correct figure showing the site boundary. Please clarify whether the sampling program was affected by access restrictions due to areas overlapping with the Metro site, construction in the northern portion (Metro access road?) and/or underground and overhead utilities. Any deviations from the SAQP should be documented in the DSI report.
j. Table 4.3 Data Quality Objectives – Optimise the Design for Obtaining Data – which locations were soil bores as all sampling locations appear to be labelled as testpit (AI-TPxx) locations on Figure F4? Please clarify whether any wells previously installed during the TSI (2021) were sampled. It is noted that the wells installed in the southern portion of the site are not in a grid formation as stated in the report.
k. Table 5.1 Investigation Methodology – were the soil bores installed in locations previously test pitted or locations where mobile plant was not accessible as it is unclear which locations were installed as soil bores? Were two samples collected from each soil bore if the maximum depth was 0.5 m bgl? Please amend the date of groundwater sampling to June 2022. Please provide comment on the depth of installation of monitoring wells to a maximum of 21.5 m bgl noting that the SAQP stated a maximum depth of 12 m bgl and the extreme wet weather conditions in the month preceding well installation. It is noted that with the exception of two wells, all standing water levels were above the screened sections. Were sediment and surface water samples collected from the same locations as Figure F4 only shows surface water sample locations?
l. Table 5.2 SAQP Non-conformances – see earlier comment on soil bore locations. Please identify the locations where soil bores were installed. Please clarify which '*initial test pitting works confirming the depth and nature of fill materials*' are being referred to and how the use of shallow soil bores instead of testpits do not affect the dataset. Please amend the label for SW9 to show that a sediment sample only was collected from this location. The testpit locations identified in the SAQP were modified following identification of the heritage finds and a revised sampling location map was subsequently developed. The DSI however, has not noted that some testpit locations in the heritage

areas had already been sampled. Please review and confirm the sampling locations marked on Figure F4 as there are a few anomalies – for example, AI_TP179 is shown outside of the site boundary; inaccessible location AI_TP180 is outside of the heritage area; AI_TP173 and AI_TP176 appear almost co-located. If the Metro area does not form part of the site, then data from the four testpits located within the Metro boundary does not form part of the dataset.

m. Section 7.1 Field Observations - The description of foreign material observations in Sections 7.1.1 and 7.1.2 is unclear. Please review the testpit logs and site observations and show on a figure where anthropogenic materials were encountered in fill materials, along with where the suspected / potential ACM presence is around the former married quarters area (show location on a figure). When showing on a figure, please interpolate appropriately between sampling locations to define the areas in a manner which will be able to be identified on site during earthworks in order to apply the measures outlined in the AMP (refer to points on AMP below).

n. Section 7.1.2 Soil Investigation Works – please confirm the December 2021 soil investigation period. The DSI discussion of fill material infers that fill was encountered across the whole of the site however the borelogs have identified a fill layer in only a few of the testpits although it is noted that topsoil was identified as clay in a number of testpit logs. The 'fill' layer in AI_TP92 was identified as clay while topsoil/fill identified in AI_TP46 to the maximum depth of investigation of 0.5 m bgl was not delineated. Based on the testpit logs, it is noted that testpits were generally installed across the site to approximately 0.3 m bgl (some testpits were terminated at 0.1 m bgl) with no fill identified across the majority of the site which is not consistent with previous findings of the Targeted Site Investigation that recommended further investigation of the site based on observation of uncontrolled filling. It is noted that investigations at depth were only undertaken at locations where groundwater wells were installed and the natural clay layer appears to generally extend beyond approximately 2.5 m bgl. Please provide clarification on the soil investigation methodology and how the works undertaken meet the data quality objectives of the overall site investigation.

o. Section 7.3 Sediment Investigation – no locations have been identified as sediment sample locations on Figure F4. Please include field observation records for sediment sampling in the report.

p. Section 7.4 Surface Water - please include field observation records for surface water sampling in the report.

q. Section 7.5.1 Soil Investigation Analytical Results – please discuss the TRH results for the samples which subsequently had silica gel clean up analysis undertaken. Please also clarify which table the results for these samples have been summarised. The NEMP biota guideline values apply to sampled biota tissue or bird eggs not soil and are therefore not appropriate to assess soil analytical results.

r. Section 7.5.4 Surface Water Investigation Analytical Results – the PFOS concentrations detected in samples collected from SW2, SW9 and SW10 exceed the 99% species protection guideline values not the 95% species protection guideline values for slightly to moderately disturbed systems.

s. Section 8 Updated Conceptual Site Model – was the CSM based on the TSI report rather than the PSI which only included groundwater, surface water and sediment sampling? The DSI report identifies that previous investigations have noted ACM to be present in on-site service pits / conduits. Given that the site is proposed to be extensively disturbed as part of the proposed redevelopment, the AMP must also include a process for removal and

validating these services, and also give some consideration to how they might be identified prior to being damaged as part of bulk earthworks (and then potentially creating large stockpiles impacted with broken ACM conduits). The potential/likely presence of these ACM service pits/conduits should be reflected in the conclusions.

t. Table 8.1 Conceptual Site Model – Please refer to above comments on the identification of fill at the site and PFOS guideline exceedances, and amend discussion as appropriate to be consistent.

- Section 9 Conclusions and Recommendations – please amend in accordance with changes to the main body of the DSI. Discussion on the results of the DSI have been presented here that should be presented earlier in Section 7 rather than the conclusions section. Site suitability conclusions can't be conditional on further remediation/management works, which is what is currently recommended with the AMP. The conclusions should be reworded to conclude that the site can be made suitable if an appropriate AMP is developed and implemented. The AMP should address the potential / suspected presence of ACM in the former married quarters area, in general areas of fill with anthropogenic inclusions, redundant service pits / conduits, plus general unexpected finds. The last bullet point discussing the suitability of the site for proposed land uses incorrectly refers to land used permitted under HIL-A as including mixed uses of '*medium to high density residential, commercial, light industrial, retail, hotel, childcare, community and education*'. Please clarify specifically which land uses the site can be made suitable for using the NEPM land use setting definitions and site land zoning settings as appropriate.

u. Table 3a Surface Water Results – the 99% high conservation guideline values for PFOS and PFOA have been listed incorrectly as default values for slightly to moderately disturbed systems.

v. Table 5 Groundwater Gauging Results – please include the standing water levels as m AHD.

w. Appendix C Borelogs – the monitoring well borelogs are incomplete. It is unclear which locations were soil bores and which ones were testpits. The scale on the testpit logs are inconsistent with 0.5 m bgl shown on one page for the majority of logs while some logs have been prepared at half the scale. Please also see earlier comments on identification of fill materials and amend borehole/testpit logs as appropriate.

x. Appendix E Calibration Records – one PID calibration certificate has been included which stated that the next scheduled calibration was due on 18/11/21. Please provide calibration certificates for the December 2021 and June 2022 soil investigation works.

y. Appendix F Laboratory Certificates – Please provide clarification on the following discrepancies identified in relation to laboratory analysis documentation: the CoC for soil samples received on 27/10/21 by Envirolab states that samples were collected on 27/20/2021 with a relinquish date of 26/10/21. No sample date was listed for water samples forwarded to ALS – please confirm the correct dates; sample dates were not listed on the CoC for samples received by Eurofins on 1/1/21 and 5/11/21.

z. Appendix G Project QAQC Assessment – please clarify the relevance of the USEPA (SW-846 Hazardous Waste Test Methods and CLP National Functional Guidelines for Inorganic and Organic Data Review) and ACT EPA guidelines for this investigation. Please provide the reasoning for why the lower than required inter- and intra-laboratory duplicate rates are not considered to reduce confidence in the representativeness or precision of the dataset. A number of the sample pair RPD exceedances occurred for analysis of volatile or semi-volatile organics and may have been impacted by sampling discrepancies – please review the discussion of QA/QC non-conformances and amend as appropriate. Please see the

comments on soil/fill sampling depths above and provide comment on how the sampling strategy undertaken was suitable to address the DQOs. Please provide details of the sampling team. Please discuss the implications of sample holding time exceedances.

Regards,
Christine

Christine Louie | Principal | JBS&G
Gadigal Country | Level 1, 50 Margaret St, Sydney, NSW
T: 02 8245 0300 | M: 0423 539 373 | E: clouie@jbsg.com.au | W: jbsg.com.au | L: Conditions and Limitations
.
Exceptional Outcomes

From: Nicholas Grbich <Nicholas.Grbich@erm.com>
Sent: Thursday, 11 August 2022 3:33 PM
To: Andrew Lau <ALau@jbsg.com.au>; Christine Louie <clouie@jbsg.com.au>
Cc: Paul Hedge <Paul.Hedge@wpca.sydney>; Ronald Hirst <Ron.Hirst@wpca.sydney>; Ian Batterley <Ian.Batterley@erm.com>; Peter Lavelle <Peter.Lavelle@erm.com>; Jack Emblen <Jack.Emblen@erm.com>
Subject: WPCA Bradfield City Centre - DSI

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

Dear Andrew and Christine,

The draft DSI for the WPCA Bradfield City Centre is now available for your review at the link below:
https://theermgroup-my.sharepoint.com/:b:/g/personal/nicholas_grbich_erm_com/EZ0J8lFdny5ImZ4b7YSwTlMBUiqp-6Rd0rSLSsOZA693wg?e=gUjmyt

Please let me know if you have any questions.

Kind regards,

Nicholas Grbich
Senior Environmental Scientist - CEnVP

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T +61 2 8586 8776 | **M** +61 415 833 925
E Nicholas.Grbich@erm.com | **W** www.erm.com

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ITEM	COMMENT & RESPONSE - Bradfield City Centre DSI	AUDITOR COMMENT 15/09/2022
a	*Executive Summary – please amend in accordance with changes to the rest of the report.*	
	Updated	Please amend to reflect the changes discussed below including the 99% ecological screening value exceedance for PFOS in surface waters.The limited extent of fill encountered is also not reflected in the executive summary.
b	*b) Section 1.1 Introduction – please clarify the boundaries of the 'Site' that is the subject of the DSI. Are the Metro access roads in the northern and eastern portions of the site included? These portions are not marked as excluded from the 'Site' however the geographic co-ordinates defining these roads are listed as being under the Metro Licensed Area, which was excluded from the DSI, on Figure F3. Please amend the reference to the current layout of the Site as Figure F2 noting that the layout of the former RAAF radio receiving station shown has now been demolished*	
	The metro access roads in the north and eastern part of the site are included in the area covered by this DSI. Figure 3 has been amended. Site boundary coordinates remain, the legend has been updated to define areas excluded from the report, namely the central compund with the yellow hatch.	The inclusion of the Metro access roads is inconsistent with the SAQP which had defined the site as excluding the roads (occupying approximately 3 hectares). Six testpit and one soil bore locations are located within the north western roadway and one testpit location is located within the south eastern roadway. Including the testpit locations omitted due to the presence of the heritage areas, the sampling density for the site has been significantly reduced. It is noted that the testpit locations in the north western access road were sampled in October - December 2021 however aerial imagery on Nearmap indicates that the original unsealed roadway was redeveloped into a bitumen/asphalt and finally concrete roadway in the period from October 2021 to June 2022. The DSI has not addressed the materials that have been placed on-site for construction of the roadway nor how the site including the roadways can be made suitable for the potential proposed land uses with the exception of potential asbestos unexpected finds. Please advise what additional sampling and/or management of the site may be required to address any potential impacts from materials placed in the roadway.
c	*c) Section 1.2 Background – the 'Site' and 'Commonwealth Land' have been used interchangeably. Please review and amend references to the site that is the subject of the DSI accordingly. See above comments on the figure showing the site area*	
	References to 'commonwealth land' have been removed.	Please review the references to the 'site' as there are incorrect references to areas that do not form part of the site that is the subject of the DSI. For example, Section 1.3 refers to the Metro works area as '*those parts of the Site were inaccessible*'.
d	*d) Section 1.5 Regulatory Requirements – the WA DoH asbestos guidelines were updated in 2021*	
	This reference has been edited to reflect the updated guidelines.	-
e	*e) Table 2.1 Site Identification Details – please check the lot and DP for the site as the former RAAF site is listed as Lot 101 in DP 128949 on ePlanning Spatial Viewer (nsw.gov.au). The zoning map provided in Appendix H is sourced from the State Environmental Planning Policy (Precincts – Western Parkland City) 2021 not the 2020 SEPP for the Western Sydney Aerotropolis. See above comments on the inclusion of the Metro access roads as part of the site.*	
	Lot and DP have been updated. The reference to the 2020 SEPP has been updated to the 2021 State Environmental Planning Policy (Precincts – Western Parkland City).	-
f	*f) Table 2.2 Site Identification Details – when were the Radio Receiving Station buildings demolished and was sampling of the Metro access roads (which form part of the site included in the DSI?) undertaken when waste materials were removed? See comments above on the inclusion of the Metro access roads as part of the site. Please clarify where the site elevation information has been gathered as the elevations do not correlate with the data presented in Appendix H Groundwater Well Survey which measured top of casing RLs between 60.949 m AHD (MW11 located in the east) and 84.943 m AHD (MW03 BLD1 located in the north west). The site elevations presented in Table 2.2 do not indicate a slope to the south-east, as stated under topography. Site geology should be updated with observations from the site investigations undertaken in 2021/2*	
	Table 2.2 has been updated to reflect the demolition of site structures within the central compound during Feb / March 2022. Environmental works related to the Metro development (including access roads) have been handled separately by the Sydney Metro team, not the WPCA. As ERM has only been engaged by WPCA, ERM has not conducted environmental works in relation to waste material removal for development of the Metro access roads. The Site elevation section in table 2.2 has been edited as has the geology section.	The reference to Lot 10 has not been amended in accordance with the amendment to Table 2.1. See comments above on Section 1.1 and the changes to the north western access road used for Metro construction and sampling undertaken in the roadways which are included in the 'site'. It is unclear where the site elevation details have been referenced from. Does the site slope north-south or north west-south east as indicated in the PSI? Nearmap imagery indicates that a building has been constructed in the area in the vicinity of the former married quarters. Please update the site setting with details of any redevelopment activity on the site including the importation of any materials to site.
g	*g) Section 3 Previous Investigations – please provide the full references for the previous ERM reports as they are referenced throughout the DSI report variously as ERM 2021, and the references to ERM reports should be checked for consistency. The First Building Area DSI is listed as a previous report but it is noted that the DSI report was prepared after the 2021 PSI and therefore not used to provide background information for the PSI*	
	Section 3 has been amended so the 1st building DSI is no longer included in the list of documents used to inform preparation of the PSI. Full references for each ERM report have been inserted and the references throughout document checked for consistency.	-
h	*h) Table 3.1 Summary of Previously Identified Contamination – please amend the locations discussed to include the DSI site and off-site as being the Metro area/s*	
	Table 3.1 has been amended.	-
i	*i) Section 4.4 Step 4 – Define the Study Boundaries – please reference the correct figure showing the site boundary. Please clarify whether the sampling program was affected by access restrictions due to areas overlapping with the Metro site, construction in the northern portion (Metro access road?) and/or underground and overhead utilities. Any deviations from the SAQP should be documented in the DSI report.*	
	Section 4.4 step 4 has been amended, and a comment has been added to mention any deviations from the SAQP as a result of the factors mentioned has been included in Section 5.	Please see comments above on the limited sampling undertaken of the Metro access roadway which has been modified with material placed since sampling was undertaken.
j	*j) Table 4.3 Data Quality Objectives – Optimise the Design for Obtaining Data – which locations were soil bores as all sampling locations appear to be labelled as testpit (AI-TPxx) locations on Figure F4? Please clarify whether any wells previously installed during the TSI (2021) were sampled. It is noted that the wells installed in the southern portion of the site are not in a grid formation as stated in the report*	
	Figure 4 has been updated to illustrate soil bore locations. Only wells installed during the round of works covered in this DSI report were sampled - not those installed during the fieldworks covered by the TSI report. Table 4.3 has been amended to indicate that the GW well network varied from the original grid-based design as a result of site access issues related to the soft low-lying areas around the natural drainage line running through Moore Gully.	Table 4.3 still refers to a grid based approach having been used for the southern portion of the site - please amend accordingly to reflect the actual approach used. The justification for installation of soil bores instead of use of testpits (due to poor ground conditions) has not included the laboratory error discussed later in Table 5.1 - please amend.
k	*k) Table 5.1 Investigation Methodology – were the soil bores installed in locations previously test pitted or locations where mobile plant was not accessible as it is unclear which locations were installed as soil bores? Were two samples collected from each soil bore if the maximum depth was 0.5 m bgl? Please amend the date of groundwater sampling to June 2022. Please provide comment on the depth of installation of monitoring wells to a maximum of 21.5 m bgl noting that the SAQP stated a maximum depth of 12 m bgl and the extreme wet weather conditions in the month preceding well installation. It is noted that with the exception of two wells, all standing water levels were above the screened sections. Were sediment and surface water samples collected from the same locations as Figure F4 only shows surface water sample locations?*	
	The test pit and soil bore sections of Table 5.1 have been amended to clarify why soil bores were performed in some locations. The date of groundwater sampling has been amended. A comment has been inserted regarding depth of monitoring well installation. Figure 4 has been amended to show surface water and sediment samples were co-located. Regarding SWLs above screen length, no concerntrations of hydrocarbons in water were detected at any levels that would indicate a risk of LNAPL. Water level raised above observed water stike during drilling in most cases.	-
l	*l) Table 5.2 SAQP Non-conformances – see earlier comment on soil bore locations. Please identify the locations where soil bores were installed. Please clarify which 'initial test pitting works confirming the depth and nature of fill materials' are being referred to and how the use of shallow soil bores instead of testpits do not affect the dataset. Please amend the label for SW9 to show that a sediment sample only was collected from this location. The testpit locations identified in the SAQP were modified following identification of the heritage finds and a revised sampling location map was subsequently developed. The DSI however, has not noted that some testpit locations in the heritage areas had already been sampled. Please review and confirm the sampling locations marked on Figure F4 as there are a few anomalies – for example, AI_TP179 is shown outside of the site boundary; inaccessible location AI_TP180 is outside of the heritage area; AI_TP173 and AI_TP176 appear almost co-located. If the Metro area does not form part of the site, then data from the four testpits located within the Metro boundary does not form part of the dataset.*	
	Table 5.2 has been amended to address soil bore location and test pits placed within metro licenced boundary comments. Figure 4 has been updated to illustrate soil bore locations. Edited table to include reference to TSI report regarding initial test pitting works confirming the depth and nature of fill materials'.A surface water sample was collected from SW9, the report has been amended to indicate no surface water sample was collected from SW3.Table edited to reflect test pit locations that were advanced in potentially significant heritage areas. Amendments to the relevant figures have been conducted to correct identified anomolies in test pit locations, e.g. the placement of AI_TP179 outside the site boundary (not possible due to the presence of the site boundary fence) has been corrected.	See above comments on Section 1.1 and the Site boundary. The Metro access roads were not included as part of the 'site' in the SAQP and the inclusion of the access roads in this revision of the DSI is therefore a non-conformance and should be discussed in the table.
m	*m) Section 7.1 Field Observations - The description of foreign material observations in Sections 7.1.1 and 7.1.2 is unclear. Please review the testpit logs and site observations and show on a figure where anthropogenic materials were encountered in fill materials, along with where the suspected / potential ACM presence is around the former married quarters area (show location on a figure). When showing on a figure, please interpolate appropriately between sampling locations to define the areas in a manner which will be able to be identified on site during earthworks in order to apply the measures outlined in the AMP (refer to points on AMP below).*	
	Figure 2 has been updated to show the location of the suspected / potential ACM associated with the former married quarters. Section 7.1.1 and 7.1.2 has been edited to provide further detail on anthropogenic inclusions and observations of fill materials during intrusive soil investigation works.	-

n	*n) Section 7.1.2 Soil Investigation Works – please confirm the December 2021 soil investigation period. The DSI discussion of fill material infers that fill was encountered across the whole of the site however the borelogs have identified a fill layer in only a few of the testpits although it is noted that topsoil was identified as clay in a number of testpit logs. The 'fill' layer in AI_TP92 was identified as clay while topsoil/fill identified in AI_TP46 to the maximum depth of investigation of 0.5 m bgl was not delineated. Based on the testpit logs, it is noted that testpits were generally installed across the site to approximately 0.3 m bgl (some testpits were terminated at 0.1 m bgl) with no fill identified across the majority of the site which is not consistent with previous findings of the Targeted Site Investigation that recommended further investigation of the site based on observation of uncontrolled filling. It is noted that investigations at depth were only undertaken at locations where groundwater wells were installed and the natural clay layer appears to generally extend beyond approximately 2.5 m bgl. Please provide clarification on the soil investigation methodology and how the works undertaken meet the data quality objectives of the overall site investigation.*	
	Section 7.1.2 has been edited to clarify the December 2021 soil investigation period. Section 7.1.2 has been edited to clarify distribution of observed fill material across the site. Following a review of the borelogs and photographs for AI_TP46 the description of the material underlying the material has been amended to natural material - The description as fill is likely down to either an error in the field transcription or data input stage. Section 7.7 - discussion of results has been updated to provide detail on how the potential for uncontrolled filling identified in the TSI has been investigated and potential for uncontrolled filling updated following higher density sampling carried out across the site and within Moore Gully as part of the current investigation.	-
o	*o) Section 7.3 Sediment Investigation – no locations have been identified as sediment sample locations on Figure F4. Please include field observation records for sediment sampling in the report.*	
	Sediment sample locations have been included in Figure 4 and field observations in Table 13 of Appendix B.	-
p	*p) Section 7.4 Surface Water - please include field observation records for surface water sampling in the report*	
	Field observations have been included in Table 14 of Appendix B.	-
q	*q) Section 7.5.1 Soil Investigation Analytical Results – please discuss the TRH results for the samples which subsequently had silica gel clean up analysis undertaken. Please also clarify which table the results for these samples have been summarised. The NEMP biota guideline values apply to sampled biota tissue or bird eggs not soil and are therefore not appropriate to assess soil analytical results.*	
	A discussion of TRH results and silica gel clean-up analysis has been inserted into section 7.5.1. References to the NEMP biota guidelines have been removed and Table 1-1b of Appendix B, sections 7.5.1 Analytical Soil Results and 7.7 Discussion of Results amended accordingly.	Section 7.7.1 states that the sum of PFHxS and PFOS concentration in soil was above the ecological screening criteria in soil at one location in the third paragraph but below the site criteria in the bullet point. Please amend.
r	*r) Section 7.5.4 Surface Water Investigation Analytical Results – the PFOS concentrations detected in samples collected from SW2, SW9 and SW10 exceed the 99% species protection guideline values not the 95% species protection guideline values for slightly to moderately disturbed systems.*	
	Section 7.5.4 has been amended to indicate SW2, 9 and 10 reported PFOS concentrations in exceedance of the 99% species protection guideline value only.	Section 7.7.3 Surface water discussion should also reflect the exceedance of the 99% species protection guideline.
s	*s) Section 8 Updated Conceptual Site Model – was the CSM based on the TSI report rather than the PSI which only included groundwater, surface water and sediment sampling? The DSI report identifies that previous investigations have noted ACM to be present in on-site service pits / conduits. Given that the site is proposed to be extensively disturbed as part of the proposed redevelopment, the AMP must also include a process for removal and validating these services, and also give some consideration to how they might be identified prior to being damaged as part of bulk earthworks (and then potentially creating large stockpiles impacted with broken ACM conduits). The potential/likely presence of these ACM service pits/conduits should be reflected in the conclusions.*	
	Section 8 has been updated to include reference to the TSI report. ERM have updated the conclusions and recommendations to include additional details requiring the recommendation regarding implementation of an AMP.	-
t	*t) Table 8.1 Conceptual Site Model – Please refer to above comments on the identification of fill at the site and PFOS guideline exceedances, and amend discussion as appropriate to be consistent. - Section 9 Conclusions and Recommendations – please amend in accordance with changes to the main body of the DSI. Discussion on the results of the DSI have been presented here that should be presented earlier in Section 7 rather than the conclusions section. Site suitability conclusions can't be conditional on further remediation/management works, which is what is currently recommended with the AMP. The conclusions should be reworded to conclude that the site can be made suitable if an appropriate AMP is developed and implemented. The AMP should address the potential / suspected presence of ACM in the former married quarters area, in general areas of fill with anthropogenic inclusions, redundant service pits / conduits, plus general unexpected finds. The last bullet point discussing the suitability of the site for proposed land uses incorrectly refers to land used permitted under HIL-A as including mixed uses of 'medium to high density residential, commercial, light industrial, retail, hotel, childcare, community and education'. Please clarify specifically which land uses the site can be made suitable for using the NEPM land use setting definitions and site land zoning settings as appropriate.*	
	Table 8.1 and discussion of results has been edited to reflect comments in relation to fill identification and PFOS guideline exceedances. Section 9 - discussion of results has been moved from Conclusions and Recommendations to Section 7. Site suitability conclusions have been reworded to state Site *can* be made suitable for the intended land-use. Details surrounding requirements of the AMP have been expanded upon. The last bullet point in section 9 has been edited to clarify that the site can be made suitable to HIL-A criteria standards, which are more stringent than many of the uses allowed in the proposed development, (which will include mixed uses of 'medium to high density residential, commercial, light industrial, retail, hotel, childcare, community and education').	Please review the discussion on exceedances of adopted ecological screening values for PFAS in soil and references to minor exceedances of PFAS in surface water under potential off-site sources of contamination and amend to reflect the cirteira that was exceeded. As the site is concluded as being able to be '*made suitable*' for the proposed lands uses provided an AMP is implemented, please provide the AMP for Auditor review.
u	*u) Table 3a Surface Water Results – the 99% high conservation guideline values for PFOS and PFOA have been listed incorrectly as default values for slightly to moderately disturbed systems.*	
	Table 3a has been ammended to correctly display the 99% and 95% guideline values for PFOS and PFOA.	-
v	*v) Table 5 Groundwater Gauging Results – please include the standing water levels as m AHD*	
	Table 5 has been updated with standing water levels in m AHD.	-
w	*w) Appendix C Borelogs – the monitoring well borelogs are incomplete. It is unclear which locations were soil bores and which ones were testpits. The scale on the testpit logs are inconsistent with 0.5 m bgl shown on one page for the majority of logs while some logs have been prepared at half the scale. Please also see earlier comments on identification of fill materials and amend borehole/testpit logs as appropriate*	
	Appendix C has been edited to show which locations were advanced as soil bores, and the scale adjusted to be consistent across all test-pit and soil bore logs. Some descriptions of fill materials have been amended.	The borelogs do not appear to have been amended to indicate those bores that were installed via boring instead of testpitting. Please review and amend.
x	*x) Appendix E Calibration Records – one PID calibration certificate has been included which stated that the next scheduled calibration was due on 18/11/21. Please provide calibration certificates for the December 2021 and June 2022 soil investigation works*	
	Calibration certificates for the requested periods have been added to Appendix E	-
y	*y) Appendix F Laboratory Certificates – Please provide clarification on the following discrepancies identified in relation to laboratory analysis documentation: the CoC for soil samples received on 27/10/21 by Envirolab states that samples were collected on 27/20/2021 with a relinquish date of 26/10/21. No sample date was listed for water samples forwarded to ALS – please confirm the correct dates; sample dates were not listed on the CoC for samples received by Eurofins on 1/1/21 and 5/11/21.*	
	ERM notes the lab report was received by Eurofins on a COC using an Envirolab template. Samples collected on the 27/10/21 were relinquished on the 28/10/21 - the dating on the COC is incorrect and leftover from a previous electronic COC that used the same template. The correct relinquish date and time has been recorded on the third page of the document COC, however typed writing from the lab appears to have covered this up. Samples sent to ALS were collected on the 27/10/2021. Samples included on the COCs received by Eurofins on the 1/11/21 (Report ref# 837639) were collected on the 28/10/2021. Samples included on the COCs received by Eurofins on the 5/11/2021 (Report ref# 838531) were collected on the 29/10/2021.	-
z	*z) Appendix G Project QAQC Assessment – please clarify the relevance of the USEPA (SW-846 Hazardous Waste Test Methods and CLP National Functional Guidelines for Inorganic and Organic Data Review) and ACT EPA guidelines for this investigation. Please provide the reasoning for why the lower than required inter- and intra-laboratory duplicate rates are not considered to reduce confidence in the representativeness or precision of the dataset. A number of the sample pair RPD exceedances occurred for analysis of volatile or semi-volatile organics and may have been impacted by sampling discrepancies – please review the discussion of QA/QC non-conformances and amend as appropriate. Please see the comments on soil/fill sampling depths above and provide comment on how the sampling strategy undertaken was suitable to address the DQOs. Please provide details of the sampling team. Please discuss the implications of sample holding time exceedances.*	
	Reference to USEPA (SW-846 Hazardous Waste Test Methods and CLP National Functional Guidelines for Inorganic and Organic Data Review) and ACT EPA guidelines have been removed. Appendix G has been updated to address questions around the duplicate/triplicate frequency achieved from soil sampling, discuss RPD exceedances with respect to volatile and semi-volatile analytes in particular, and sampling strategy undertaken. Holding time breaches from the primary laboratory are noted for the following reports: 837639 (Eurofins), 838531 (Eurofins) and 900392 (Eurofins). For report 837639 - holding time breach occurred as sample date was not supplied on the COC. As indicated in response to comment Y, these samples were collected on the 28/10/2021 and received on 01/11/2021, well within the 7 day recommended holding time provided by the laboratory for volatile compounds (the shortest holding time provided for the relevant analytical suite). For report 838531 the COC was received 7 days after sample collection, hence the recommended holding time for these samples was exceeded. For report 900392, ERM notes that samples relating to this report were collected on the 21/06/22 and received on the 22/06/22 - hence all samples were collected and delivered to the lab within the recommended holding time. ERM notes that the sample receipt advice for report 900392 indicates that the trip spike and blank did not include sample dates, however this has clearly been provided on the COC, hence the holding time breach issued with this report appears to be a laboratory error.	-

From:	Christine Louie
To:	Nicholas Grbich
Cc:	Andrew Lau; Paul Hedge; Ron Hirst; Ian Batterley
Subject:	RE: Bradfield AMP and DSI Report
Date:	Thursday, 13 October 2022 11:07:00 AM
Attachments:	image004.png image005.png image006.png image008.png image009.png image010.png image011.png image012.png image013.png image014.png image015.png

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Hi Nick,

The site auditor has reviewed revision 4 (final) of *Detailed Site Investigation Bradfield City Centre* (dated 11/10/22) and considers that this report may be accepted as final.

Regards,
Christine

Christine Louie | Principal | JBS&G
Gadigal Country | Level 1, 50 Margaret St, Sydney, NSW
T: 02 8245 0300 | M: 0423 539 373 | E: clouie@jbsg.com.au | W: jbsg.com.au | L: Conditions and Limitations

Exceptional Outcomes

From: Nicholas Grbich <Nicholas.Grbich@erm.com>
Sent: Tuesday, 11 October 2022 4:20 PM
To: Christine Louie <clouie@jbsg.com.au>
Cc: Andrew Lau <ALau@jbsg.com.au>; Paul Hedge <Paul.Hedge@wpca.sydney>; Ron Hirst <Ron.Hirst@wpca.sydney>; Ian Batterley <Ian.Batterley@erm.com>
Subject: RE: Bradfield AMP and DSI Report

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

Hi Christine,

The update to the executive summary has been made as per our discussion, the final report is now ready to be downloaded at the link below:
https://theermgroup-my.sharepoint.com/:b:/g/personal/nicholas_grbich_erm_com/EcKPe06yv39EicvTdCzyA0IBxJ1xpziqLCU9H4RPEH6LVA?e=lfMkZF

Kind regards,

Nicholas Grbich
Senior Environmental Scientist – CenvP

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Please consider the environment before printing this message
*Check out ERM's **ERM's Sustainability Report 2022: Accelerating Impact** and **ERM Foundation Annual Review***

From: Christine Louie <clouie@jbsg.com.au>
Sent: Tuesday, October 11, 2022 2:22 PM
To: Ian Batterley <Ian.Batterley@erm.com>
Cc: Nicholas Grbich <Nicholas.Grbich@erm.com>; Andrew Lau <ALau@jbsg.com.au>; Paul Hedge <Paul.Hedge@wpca.sydney>; Ron Hirst <Ron.Hirst@wpca.sydney>
Subject: RE: Bradfield AMP and DSI Report

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Ian,

The site auditor has reviewed revision 4 of *Detailed Site Investigation Bradfield City Centre* (dated 5/10/22) and the consultant responses to revision 3.

With the exception of the reference to PFOS exceeding the ecological screening values in three soil samples in the Executive Summary, the revised DSI has generally addressed the auditor comments satisfactorily. Please amend the Executive Summary to reflect no exceedances of PFAS screening values.

The DSI may be accepted as final once the amendment has been made.

Regards,
Christine

Christine Louie | Principal | JBS&G
Gadigal Country | Level 1, 50 Margaret St, Sydney, NSW
T: 02 8245 0300 | M: 0423 539 373 | E: clouie@jbsg.com.au | W: jbsg.com.au | L: Conditions and Limitations
-
Exceptional Outcomes

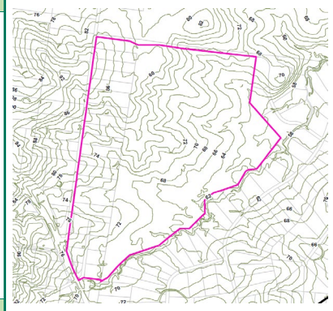
From: Ian Batterley <Ian.Batterley@erm.com>
Sent: Wednesday, 5 October 2022 12:15 PM
To: Andrew Lau <ALau@jbsg.com.au>; Christine Louie <clouie@jbsg.com.au>
Cc: Nicholas Grbich <Nicholas.Grbich@erm.com>
Subject: FW: Bradfield AMP and DSI Report

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

Hi Andrew / Christine

Please find the attached audit comments response spreadsheet detailing ERMs response to your recent comments on the DSI report

ITEM	COMMENT & RESPONSE - Bradfield City Centre DSI	ERM response - 9/09/2022	AUDITOR COMMENT 15/09/2022	ERM response XX/09/2022
a	*Executive Summary – please amend in accordance with changes to the rest of the report.*	Updated	Please amend to reflect the changes discussed below including the 99% ecological screening value exceedance for PFOS in surface waters. The limited extent of fill encountered is also not reflected in the executive summary.	Section updated
b	*b) Section 1.1 Introduction – please clarify the boundaries of the 'Site' that is the subject of the DSI. Are the Metro access roads in the northern and eastern portions of the site included? These portions are not marked as excluded from the 'Site' however the geographic co-ordinates defining these roads are listed as being under the Metro Licensed Area, which was excluded from the DSI, on Figure F3. Please amend the reference to the current layout of the Site as Figure F2 noting that the layout of the former RAAF radio receiving station shown has now been demolished*	The metro access roads in the north and eastern part of the site are included in the area covered by this DSI. Figure 3 has been amended. Site boundary coordinates remain, the legend has been updated to define areas excluded from the report, namely the central compound with the yellow hatch.	The inclusion of the Metro access roads is inconsistent with the SAQP which had defined the site as excluding the roads (occupying approximately 3 hectares). Six testpit and one soil bore locations are located within the north western roadway and one testpit location is located within the south eastern roadway. Including the testpit locations omitted due to the presence of the heritage areas, the sampling density for the site has been significantly reduced. It is noted that the testpit locations in the north western access road were sampled in October - December 2021 however aerial imagery on Nearmap indicates that the original unsealed roadway was redeveloped into a bitumen/asphalt and finally concrete roadway in the period from October 2021 to June 2022. The DSI has not addressed the materials that have been placed on-site for construction of the roadway nor how the site including the roadways can be made suitable for the potential proposed land uses with the exception of potential asbestos unexpected finds. Please advise what additional sampling and/or management of the site may be required to address any potential impacts from materials placed in the roadway.	After discussions with WPCA, the access roads will be excluded from this revision of the report to streamline the audit process. A separate report will be issued at a later date to close out these sections.
c	*c) Section 1.2 Background – the 'Site' and 'Commonwealth Land' have been used interchangeably. Please review and amend references to the site that is the subject of the DSI accordingly. See above comments on the figure showing the site area*	References to 'commonwealth land' have been removed.	Please review the references to the 'site' as there are incorrect references to areas that do not form part of the site that is the subject of the DSI. For example, Section 1.3 refers to the Metro works area as '*those parts of the Site were inaccessible*'.	A review of all usages of 'the Site' within the report has been completed, editing where incorrect uses have occurred.
d	*d) Section 1.5 Regulatory Requirements – the WA DoH asbestos guidelines were updated in 2021*	This reference has been edited to reflect the updated guidelines.	-	-
e	*e) Table 2.1 Site Identification Details – please check the lot and DP for the site as the former RAAF site is listed as Lot 101 in DP 128949 on ePlanning Spatial Viewer (nsw.gov.au). The zoning map provided in Appendix H is sourced from the State Environmental Planning Policy (Precincts – Western Parkland City) 2021 not the 2020 SEPP for the Western Sydney Aerotropolis. See above comments on the inclusion of the Metro access roads as part of the site.*	Lot and DP have been updated. The reference to the 2020 SEPP has been updated to the 2021 State Environmental Planning Policy (Precincts – Western Parkland City).	-	-
f	*f) Table 2.2 Site Identification Details – when were the Radio Receiving Station buildings demolished and was sampling of the Metro access roads (which form part of the site included in the DSI?) undertaken when waste materials were removed? See comments above on the inclusion of the Metro access roads as part of the site. Please clarify where the site elevation information has been gathered as the elevations do not correlate with the data presented in Appendix H Groundwater Well Survey which measured top of casing RLs between 60.949 m AHD (MW11 located in the east) and 84.943 m AHD (MW03 BLD1 located in the north west). The site elevations presented in Table 2.2 do not indicate a slope to the south-east, as stated under topography. Site geology should be updated with observations from the site investigations undertaken in 2021/2*	Table 2.2 has been updated to reflect the demolition of site structures within the central compound during Feb / March 2022. Environmental works related to the Metro development (including access roads) have been handled separately by the Sydney Metro team, not the WPCA. As ERM has only been engaged by WPCA, ERM has not conducted environmental works in relation to waste material removal for development of the Metro access roads. The Site elevation section in table 2.2 has been edited as has the geology section.	The reference to Lot 10 has not been amended in accordance with the amendment to Table 2.1. See comments above on Section 1.1 and the changes to the north western access road used for Metro construction and sampling undertaken in the roadways which are included in the 'site'. It is unclear where the site elevation details have been referenced from. Does the site slope north-south or north west-south east as indicated in the PSI? Nearmap imagery indicates that a building has been constructed in the area in the vicinity of the former married quarters. Please update the site setting with details of any redevelopment activity on the site including the importation of any materials to site.	Reference to lot 10 amended to Lot 101. As per previous comments, the access roads will be excluded from this revision of the report. The site topography section of table 2.2 has been updated based on topography data presented in the lotsearch report undertaken as part of the PSI. Section updated in regards to temporary structure. Compliance certificate for imported DGB attached in appendix.
g	*g) Section 3 Previous Investigations – please provide the full references for the previous ERM reports as they are referenced throughout the DSI report variously as ERM 2021, and the references to ERM reports should be checked for consistency. The First Building Area DSI is listed as a previous report but it is noted that the DSI report was prepared after the 2021 PSI and therefore not used to provide background information for the PSI*	*Section 3 has been amended so the 1st building DSI is no longer included in the list of documents used to inform preparation of the PSI. Full references for each ERM report have been inserted and the references throughout document checked for consistency.*	-	-
h	*h) Table 3.1 Summary of Previously Identified Contamination – please amend the locations discussed to include the DSI site and off-site as being the Metro area/s*	Table 3.1 has been amended.	-	-
i	*i) Section 4.4 Step 4 – Define the Study Boundaries – please reference the correct figure showing the site boundary. Please clarify whether the sampling program was affected by access restrictions due to areas overlapping with the Metro site, construction in the northern portion (Metro access road?) and/or underground and overhead utilities. Any deviations from the SAQP should be documented in the DSI report.*	Section 4.4 step 4 has been amended, and a comment has been added to mention any deviations from the SAQP as a result of the factors mentioned has been included in Section 5.	Please see comments above on the limited sampling undertaken of the Metro access roadway which has been modified with material placed since sampling was undertaken.	Metro access roads excluded from this revision
j	*j) Table 4.3 Data Quality Objectives – Optimise the Design for Obtaining Data – which locations were soil bores as all sampling locations appear to be labelled as testpit (AI-TPxx) locations on Figure F4? Please clarify whether any wells previously installed during the TSI (2021) were sampled. It is noted that the wells installed in the southern portion of the site are not in a grid formation as stated in the report*	Figure 4 has been updated to illustrate soil bore locations. Only wells installed during the round of works covered in this DSI report were sampled - not those installed during the fieldworks covered by the TSI report. Table 4.3 has been amended to indicate that the GW well network varied from the original grid-based design as a result of site access issues related to the soft low-lying areas around the natural drainage line running through Moore Gully.	Table 4.3 still refers to a grid based approach having been used for the southern portion of the site - please amend accordingly to reflect the actual approach used. The justification for installation of soil bores instead of use of testpits (due to poor ground conditions) has not included the laboratory error discussed later in Table 5.1 - please amend.	These sections have been amended
k	*k) Table 5.1 Investigation Methodology – were the soil bores installed in locations previously test pitted or locations where mobile plant was not accessible as it is unclear which locations were installed as soil bores? Were two samples collected from each soil bore if the maximum depth was 0.5 m bgl? Please amend the date of groundwater sampling to June 2022. Please provide comment on the depth of installation of monitoring wells to a maximum of 21.5 m bgl noting that the SAQP stated a maximum depth of 12 m bgl and the extreme wet weather conditions in the month preceding well installation. It is noted that with the exception of two wells, all standing water levels were above the screened sections. Were sediment and surface water samples collected from the same locations as Figure F4 only shows surface water sample locations?*	The test pit and soil bore sections of Table 5.1 have been amended to clarify why soil bores were performed in some locations. The date of groundwater sampling has been amended. A comment has been inserted regarding depth of monitoring well installation. Figure 4 has been amended to show surface water and sediment samples were co-located. Regarding SWLs above screen length, no concentrations of hydrocarbons in water were detected at any levels that would indicate a risk of LNAPL. Water level raised above observed water strike during drilling in most cases.	-	-
l	*l) Table 5.2 SAQP Non-conformances – see earlier comment on soil bore locations. Please identify the locations where soil bores were installed. Please clarify which 'initial test pitting works confirming the depth and nature of fill materials' are being referred to and how the use of shallow soil bores instead of testpits do not affect the dataset. Please amend the label for SW9 to show that a sediment sample only was collected from this location. The testpit locations identified in the SAQP were modified following identification of the heritage finds and a revised sampling location map was subsequently developed. The DSI however, has not noted that some testpit locations in the heritage areas had already been sampled. Please review and confirm the sampling locations marked on Figure F4 as there are a few anomalies – for example, AI_TP179 is shown outside of the site boundary; inaccessible location AI_TP180 is outside of the heritage area; AI_TP173 and AI_TP176 appear almost co-located. If the Metro area does not form part of the site, then data from the four testpits located within the Metro boundary does not form part of the dataset.*	*Table 5.2 has been amended to address soil bore location and test pits placed within metro licenced boundary comments. Figure 4 has been updated to illustrate soil bore locations. Edited table to include reference to TSI report regarding initial test pitting works confirming the depth and nature of fill materials'. A surface water sample was collected from SW9, the report has been amended to indicate no surface water sample was collected from SW3.Table edited to reflect test pit locations that were advanced in potentially significant heritage areas. Amendments to the relevant figures have been conducted to correct identified anomalies in test pit locations, e.g. the placement of AI_TP179 outside the site boundary (not possible due to the presence of the site boundary fence) has been corrected.*	See above comments on Section 1.1 and the Site boundary. The Metro access roads were not included as part of the 'site' in the SAQP and the inclusion of the access roads in this revision of the DSI is therefore a non-conformance and should be discussed in the table.	Metro roads excluded from this revision
m	*m) Section 7.1 Field Observations - The description of foreign material observations in Sections 7.1.1 and 7.1.2 is unclear. Please review the testpit logs and site observations and show on a figure where anthropogenic materials were encountered in fill materials, along with where the suspected / potential ACM presence is around the former married quarters area (show location on a figure). When showing on a figure, please interpolate appropriately between sampling locations to define the areas in a manner which will be able to be identified on site during earthworks in order to apply the measures outlined in the AMP (refer to points on AMP below).*	Figure 2 has been updated to show the location of the suspected / potential ACM associated with the former married quarters. Section 7.1.1 and 7.1.2 has been edited to provide further detail on anthropogenic inclusions and observations of fill materials during intrusive soil investigation works.	-	-
n	*n) Section 7.1.2 Soil Investigation Works – please confirm the December 2021 soil investigation period. The DSI discussion of fill material infers that fill was encountered across the whole of the site however the borelogs have identified a fill layer in only a few of the testpits although it is noted that topsoil was identified as clay in a number of testpit logs. The 'fill' layer in AI_TP92 was identified as clay while topsoil/fill identified in AI_TP46 to the maximum depth of investigation of 0.5 m bgl was not delineated. Based on the testpit logs, it is noted that testpits were generally installed across the site to approximately 0.3 m bgl (some testpits were terminated at 0.1 m bgl) with no fill identified across the majority of the site which is not consistent with previous findings of the Targeted Site Investigation that recommended further investigation of the site based on observation of uncontrolled filling. It is noted that investigations at depth were only undertaken at locations where groundwater wells were installed and the natural clay layer appears to generally extend beyond approximately 2.5 m bgl. Please provide clarification on the soil investigation methodology and how the works undertaken meet the data quality objectives of the overall site investigation.*	Section 7.1.2 has been edited to clarify the December 2021 soil investigation period. Section 7.1.2 has been edited to clarify distribution of observed fill material across the site. Following a review of the borelogs and photographs for AI_TP46 the description of the material underlying the material has been amended to natural material - The description as fill is likely down to either an error in the field transcription or data input stage. Section 7.7 - discussion of results has been updated to provide detail on how the potential for uncontrolled filling identified in the TSI has been investigated and potential for uncontrolled filling updated following higher density sampling carried out across the site and within Moore Gully as part of the current investigation.	-	-
o	*o) Section 7.3 Sediment Investigation – no locations have been identified as sediment sample locations on Figure F4. Please include field observation records for sediment sampling in the report.*	Sediment sample locations have been included in Figure 4 and field observations in Table 13 of Appendix B.	-	-
p	*p) Section 7.4 Surface Water - please include field observation records for surface water sampling in the report*	Field observations have been included in Table 14 of Appendix B.	-	-



q	*q) Section 7.5.1 Soil Investigation Analytical Results – please discuss the TRH results for the samples which subsequently had silica gel clean up analysis undertaken. Please also clarify which table the results for these samples have been summarised. The NEMP biota guideline values apply to sampled biota tissue or bird eggs not soil and are therefore not appropriate to assess soil analytical results.*	A discussion of TRH results and silica gel clean-up analysis has been inserted into section 7.5.1. References to the NEMP biota guidelines have been removed and Table 1-1b of Appendix B, sections 7.5.1 Analytical Soil Results and 7.7 Discussion of Results amended accordingly.	Section 7.7.1 states that the sum of PFHxS and PFOS concentration in soil was above the ecological screening criteria in soil at one location in the third paragraph but below the site criteria in the bullet point. Please amend.	Sum of PFHxS and PFOS was detected in soil but not above eco guideline, paragraph three of this section has been amended.
r	*r) Section 7.5.4 Surface Water Investigation Analytical Results – the PFOS concentrations detected in samples collected from SW2, SW9 and SW10 exceed the 99% species protection guideline values not the 95% species protection guideline values for slightly to moderately disturbed systems.*	Section 7.5.4 has been amended to indicate SW2, 9 and 10 reported PFOS concentrations in exceedance of the 99% species protection guideline value only.	Section 7.7.3 Surface water discussion should also reflect the exceedance of the 99% species protection guideline.	Section updated
s	*s) Section 8 Updated Conceptual Site Model – was the CSM based on the TSI report rather than the PSI which only included groundwater, surface water and sediment sampling? The DSI report identifies that previous investigations have noted ACM to be present in on-site service pits / conduits. Given that the site is proposed to be extensively disturbed as part of the proposed redevelopment, the AMP must also include a process for removal and validating these services, and also give some consideration to how they might be identified prior to being damaged as part of bulk earthworks (and then potentially creating large stockpiles impacted with broken ACM conduits). The potential/likely presence of these ACM service pits/conduits should be reflected in the conclusions.*	Section 8 has been updated to include reference to the TSI report. ERM have updated the conclusions and recommendations to include additional details requiring the recommendation regarding implementation of an AMP.	-	-
t	*t) Table 8.1 Conceptual Site Model – Please refer to above comments on the identification of fill at the site and PFOS guideline exceedances, and amend discussion as appropriate to be consistent. - Section 9 Conclusions and Recommendations – please amend in accordance with changes to the main body of the DSI. Discussion on the results of the DSI have been presented here that should be presented earlier in Section 7 rather than the conclusions section. Site suitability conclusions can't be conditional on further remediation/management works, which is what is currently recommended with the AMP. The conclusions should be reworded to conclude that the site can be made suitable if an appropriate AMP is developed and implemented. The AMP should address the potential / suspected presence of ACM in the former married quarters area, in general areas of fill with anthropogenic inclusions, redundant service pits / conduits, plus general unexpected finds. The last bullet point discussing the suitability of the site for proposed land uses incorrectly refers to land used permitted under HIL-A as including mixed uses of 'medium to high density residential, commercial, light industrial, retail, hotel, childcare, community and education'. Please clarify specifically which land uses the site can be made suitable for using the NEPM land use setting definitions and site land zoning settings as appropriate.*	Table 8.1 and discussion of results has been edited to reflect comments in relation to fill identification and PFOS guideline exceedances. Section 9 - discussion of results has been moved from Conclusions and Recommendations to Section 7. Site suitability conclusions have been reworded to state Site can be made suitable for the intended land-use. Details surrounding requirements of the AMP have been expanded upon. The last bullet point in section 9 has been edited to clarify that the site can be made suitable to HIL-A criteria standards, which are more stringent than many of the uses allowed in the proposed development, (which will include mixed uses of 'medium to high density residential, commercial, light industrial, retail, hotel, childcare, community and education').	Please review the discussion on exceedances of adopted ecological screening values for PFAS in soil and references to minor exceedances of PFAS in surface water under potential off-site sources of contamination and amend to reflect the criteria that was exceeded. As the site is concluded as being able to be '*made suitable*' for the proposed lands uses provided an AMP is implemented, please provide the AMP for Auditor review.	Section edited to reflect no exceedances for soil and to specify that surface water exceeded 99% species protection. AMP will be provided for review.
u	*u) Table 3a Surface Water Results – the 99% high conservation guideline values for PFOS and PFOA have been listed incorrectly as default values for slightly to moderately disturbed systems.*	Table 3a has been amended to correctly display the 99% and 95% guideline values for PFOS and PFOA.	-	-
v	*v) Table 5 Groundwater Gauging Results – please include the standing water levels as m AHD*	Table 5 has been updated with standing water levels in m AHD.	-	-
w	*w) Appendix C Borelogs – the monitoring well borelogs are incomplete. It is unclear which locations were soil bores and which ones were testpits. The scale on the testpit logs are inconsistent with 0.5 m bgl shown on one page for the majority of logs while some logs have been prepared at half the scale. Please also see earlier comments on identification of fill materials and amend borehole/testpit logs as appropriate*	Appendix C has been edited to show which locations were advanced as soil bores, and the scale adjusted to be consistent across all test-pit and soil bore logs. Some descriptions of fill materials have been amended.	The borelogs do not appear to have been amended to indicate those bores that were installed via boring instead of testpitting. Please review and amend.	Borelogs reviewed and amended
x	*x) Appendix E Calibration Records – one PID calibration certificate has been included which stated that the next scheduled calibration was due on 18/11/21. Please provide calibration certificates for the December 2021 and June 2022 soil investigation works*	*Calibration certificates for the requested periods have been added to Appendix E*	-	-
y	*y) Appendix F Laboratory Certificates – Please provide clarification on the following discrepancies identified in relation to laboratory analysis documentation: the CoC for soil samples received on 27/10/21 by Envirolab states that samples were collected on 27/20/2021 with a relinquish date of 26/10/21. No sample date was listed for water samples forwarded to ALS – please confirm the correct dates; sample dates were not listed on the CoC for samples received by Eurofins on 1/1/21 and 5/11/21.*	ERM notes the lab report was received by Eurofins on a COC using an Envirolab template. Samples collected on the 27/10/21 were relinquished on the 28/10/21 - the dating on the COC is incorrect and leftover from a previous electronic COC that used the same template. The correct relinquish date and time has been recorded on the third page of the document COC, however typed writing from the lab appears to have covered this up. Samples sent to ALS were collected on the 27/10/2021. Samples included on the COCs received by Eurofins on the 1/11/21 (Report ref# 837639) were collected on the 28/10/2021. Samples included on the COCs received by Eurofins on the 5/11/2021 (Report ref# 838531) were collected on the 29/10/2021.	-	-
z	*z) Appendix G Project QAQC Assessment – please clarify the relevance of the USEPA (SW-846 Hazardous Waste Test Methods and CLP National Functional Guidelines for Inorganic and Organic Data Review) and ACT EPA guidelines for this investigation. Please provide the reasoning for why the lower than required inter- and intra-laboratory duplicate rates are not considered to reduce confidence in the representativeness or precision of the dataset. A number of the sample pair RPD exceedances occurred for analysis of volatile or semi-volatile organics and may have been impacted by sampling discrepancies – please review the discussion of QA/QC non-conformances and amend as appropriate. Please see the comments on soil/fill sampling depths above and provide comment on how the sampling strategy undertaken was suitable to address the DQOs. Please provide details of the sampling team. Please discuss the implications of sample holding time exceedances.*	Reference to USEPA (SW-846 Hazardous Waste Test Methods and CLP National Functional Guidelines for Inorganic and Organic Data Review) and ACT EPA guidelines have been removed. Appendix G has been updated to address questions around the duplicate/triplicate frequency achieved from soil sampling, discuss RPD exceedances with respect to volatile and semi-volatile analytes in particular, and sampling strategy undertaken. Holding time breaches from the primary laboratory are noted for the following reports: 837639 (Eurofins), 838531 (Eurofins) and 900392 (Eurofins). For report 837639 - holding time breach occurred as sample date was not supplied on the COC. As indicated in response to comment Y, these samples were collected on the 28/10/2021 and received on 01/11/2021, well within the 7 day recommended holding time provided by the laboratory for volatile compounds (the shortest holding time provided for the relevant analytical suite). For report 838531 the COC was received 7 days after sample collection, hence the recommended holding time for these samples was exceeded. For report 900392, ERM notes that samples relating to this report were collected on the 21/06/22 and received on the 22/06/22 - hence all samples were collected and delivered to the lab within the recommended holding time. ERM notes that the sample receipt advice for report 900392 indicates that the trip spike and blank did not include sample dates, however this has clearly been provided on the COC, hence the holding time breach issued with this report appears to be a laboratory error.	-	-

From:	Christine Louie
To:	Nicholas Grbich
Cc:	Andrew Lau; Paul Hedge; Ron Hirst; Ian Batterley
Subject:	RE: Draft Bradfield City Centre - Auditor Comments
Date:	Tuesday, 8 November 2022 10:46:00 AM
Attachments:	image001.png image003.png image004.png image007.png image008.png image009.png

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Hi Nicholas,

The auditor has reviewed revision 1 of the Asbestos Management Plan for Bradfield City Centre (dated 19/10/22) and the responses to auditor comments on the draft AMP rev 0.

The auditor has no further comments and the report may be accepted as final.

Regards,
Christine

Christine Louie | Principal | JBS&G
Gadigal Country | Level 1, 50 Margaret St, Sydney, NSW
T: 02 8245 0300 | M: 0423 539 373 | E: clouie@jbsg.com.au | W: jbsg.com.au | L: Conditions and Limitations

Exceptional Outcomes

From: Nicholas Grbich <Nicholas.Grbich@erm.com>
Sent: Monday, 24 October 2022 1:07 PM
To: Christine Louie <clouie@jbsg.com.au>
Cc: Andrew Lau <ALau@jbsg.com.au>; Paul Hedge <Paul.Hedge@wpca.sydney>; Ron Hirst <Ron.Hirst@wpca.sydney>; Ian Batterley <Ian.Batterley@erm.com>
Subject: RE: Draft Bradfield City Centre - Auditor Comments

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

Hi Christine,

Apologies for the delay, please see attached response table to comments on the draft AMP.

Kind regards,

Nicholas Grbich
Senior Environmental Scientist – CenvP

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From: Nicholas Grbich
Sent: Wednesday, October 19, 2022 1:21 PM
To: Christine Louie <clouie@jbsg.com.au>
Cc: Andrew Lau <ALau@jbsg.com.au>; Paul Hedge <Paul.Hedge@wpca.sydney>; Ron Hirst <Ron.Hirst@wpca.sydney>; Ian Batterley <Ian.Batterley@erm.com>
Subject: RE: Draft Bradfield City Centre - Auditor Comments

Hi Christine,

Please find attached the updated AMP, issued as preliminary final in response to the auditors comments.

We are finalising the comment responses and will be sending them through shortly.

Kind regards,

Nicholas Grbich
Senior Environmental Scientist – CenvP

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From: Christine Louie <clouie@jbsg.com.au>
Sent: Thursday, October 13, 2022 10:15 AM
To: Ian Batterley <Ian.Batterley@erm.com>
Cc: Nicholas Grbich <Nicholas.Grbich@erm.com>; Andrew Lau <ALau@jbsg.com.au>; Paul Hedge <Paul.Hedge@wpca.sydney>; Ron Hirst <Ron.Hirst@wpca.sydney>
Subject: Draft Bradfield City Centre - Auditor Comments

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Hi Ian,

The site auditor has reviewed the following document:

- *Asbestos Management Plan Bradfield City Centre*. Draft Version 1.0, 5 October 2022. ERM (2022).

Review of the above document has been undertaken by the site auditor against the requirements of the relevant guidelines made or approved by the NSW EPA. Auditor comments are provided below:

a. General – an Asbestos Management Plan (AMP) is required to be prepared and implemented during construction earthworks at the site to meet the requirements of the CLM Act and NSW EPA. with the end result being a site that is suitable for the proposed land uses. The implementation of the AMP with a validation report provided at the completion of construction earthworks is required to demonstrate that the site is suitable for the proposed land uses. The AMP is required to be revised to provide sufficient background and detail to document the asbestos management processes to meet the project objectives. Careful consideration should be given to comment (h) below as it has potential material time/cost project implications and we suggest a discussion around this prior to finalising the document.
b. Executive Summary – please include this section.
c. Section 1 Introduction – please amend to reflect the project objectives of remediation/management of the site to meet the necessary requirements for the site to be made suitable for the proposed uses. Please include details of the scope of work of the AMP including establishment of validation criteria, validation procedures (inspection, and sampling and reporting requirements).
d. Section 1.1 Background – this plan is for the management of asbestos which has been stated as being previously reported within the 'former married quarters area'. Please include a summary of the detected impacts in this area of concern.
e. Section 3 Statutory Requirements – this section currently addresses mainly OHS requirements. Please include details of regulatory requirements for contaminated land management including but not limited to State Environmental Planning Policy (Resilience and Hazards) 2021, CLM Act 1997, EP&A Act, NSW EPA guidelines and NEPC 2013. Please also include consideration of the NSW EPA *Position Statement – WA guidelines for asbestos contaminated sites*.
f. Section 4 Asbestos Identification and Removal – the assessment, management and validation of identified asbestos on the site is required to be undertaken in accordance with the requirements of NSW EPA and NEPM (2013). Please include all relevant provisions (including but not limited to sampling density, analysis and validation reporting) are included in this section. Where references are made to guidelines (e.g. EPA 2022, NEPC 2013 and EPA 2014), the relevant provisions are required to be incorporated into the AMP so that it is a standalone document. The responsibilities of relevant parties including the Principal Contractor, subcontractors, environmental consultant, licensed asbestos assessor must be clearly specified. It is noted that there are references to environmental consultant, independent competent person and licensed asbestos assessor – please clarify the requirements for these parties and use consistent terminology if these

parties refer to the same entity.

g. Section 4.1.1 Initial Find Procedure – all sampling and analysis of potential asbestos impacted material must be undertaken in accordance with the requirements of NSW EPA and NEPM (2013). Please review and amend the proposed stockpile footprint validation density of 1 sample per 100 m^2 which does not meet the requirements of NEPM (2013)/WA DoH (2009) for an area considered 'likely' to be impacted by asbestos as per WA DOH (2009).
h. Section 4.2 Asbestos Removal Procedures – please state what would be considered '*large concentrations of ACM*'. The AMP currently does not include on-site containment as a preferred asbestos management strategy in the event that large quantities of ACM are encountered that are considered not to be viable to be removed for off-site disposal. Due to the exclusion of on-site containment in the AMP, a new Remediation Action Plan and consequent amendment to development consent would be required to allow this management strategy to be used, resulting in delays to construction works until such time that approval to proceed is granted.
i. Section 4.2.1 Isolated ACM Within Surface Soils – this section also discusses the presence of ACM fragments in subsurface soils which should be detailed in a separate section.
j. Section 4.4 Asbestos Clearance/Validation Procedures - validation criteria for removal of asbestos (ACM and FA/AF) must be outlined. Sampling and analysis requirements as part of validation procedures must also be outlined in the AMP. A validation report is required to be prepared following any asbestos removal and validation works. The validation report must be prepared in accordance with NSW EPA (2020) including but not limited to a summary of all removal/remediation works, analytical results, inspection records/photographs, material tracking/disposal records and clearance reports/certificates, and make conclusions on the suitability of the site for proposed land uses. Details and documentation for any materials imported since the completion of the DSI must also be included in the validation report.
k. Section 4.4 .1 Surface ACM Validation – please review and amend the proposed sampling rate of 1 sample per 100 m^2 which does not meet the requirements of NEPM (2013)/WA DoH (2009) for an area considered 'likely' to be impacted by asbestos as per WA DOH (2009). Please correct the reference to 'hen-picked'. Please define what the '*elevated contaminant concentrations*' that may be encountered.
l. Table 3: Asbestos Excavation Validation Plan – please review and amend the proposed validation sampling rate of 1 sample per 100 m^2 which does not meet the requirements of NEPM (2013)/WA DoH (2021) for an area considered 'likely' to be impacted by asbestos as per WA DOH (2009).
m. Figure F2 – the site boundary and former married quarters area are required to be identified with geographical co-ordinates.

Regards,
Christine

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T: 02 8245 0300 | M: 0423 539 373 | E: clouie@jbsg.com.au | W: jbsg.com.au | L: Conditions and Limitations

Exceptional Outcomes

From: Ian Batterley
To: Christine Louie; Andrew Lau
Cc: Ronald Hirst; Paul Hedge; Nicholas Grbich; Peter Lavelle; Christian Knight
Subject: WPCA Site - Open Space
Date: Wednesday, 9 November 2022 3:59:21 PM
Attachments: image001.png

[EXTERNAL EMAIL] Stop and think before opening attachments, clicking or responding.

Hi Christine and Andrew

We received your note re open space at the WPCA site not being included within the DSI report. Please note we will update the DSI report to Final V2 and include a clear conclusion that the site is suitable for all uses HILA and public open space / parkland.

The updated report will be submitted tomorrow

Regards

Ian

Ian Batterley
Partner

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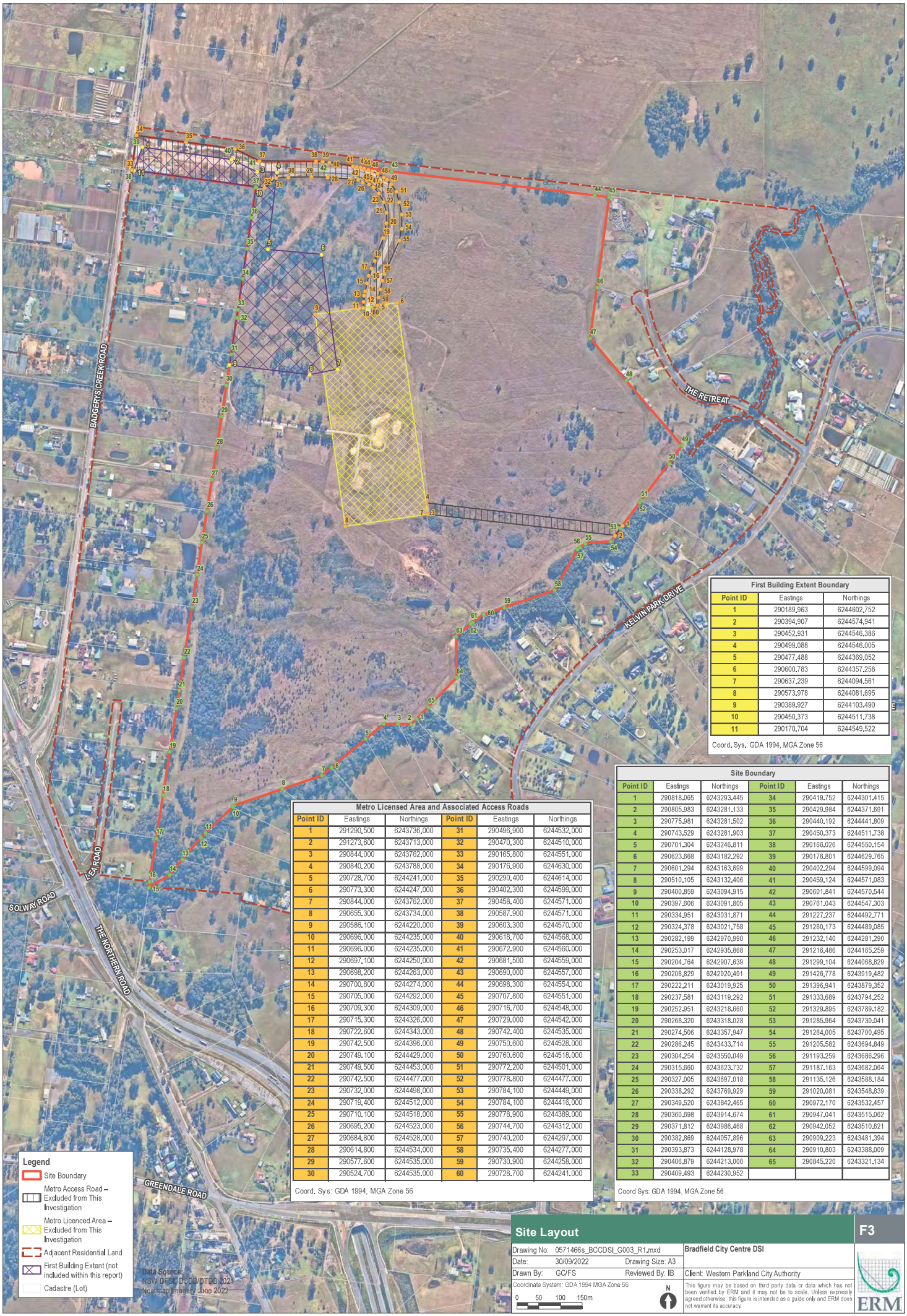
Appendix C Site Plan



First Building Extent Boundary

Point ID	Eastings	Northings
1	290189.963	6244602.752
2	290394.907	6244574.941
3	290452.931	6244546.386
4	290499.088	6244546.005
5	290477.488	6244369.052
6	290600.783	6244357.258
7	290637.239	6244094.561
8	290573.978	6244081.695
9	290389.927	6244103.490
10	290450.373	6244511.738
11	290170.704	6244549.522

Coord. Sys.: GDA 1994, MGA Zone 56

Metro Licensed Area and Associated Access Roads

Point ID	Eastings	Northings	Point ID	Eastings	Northings
1	291290.500	6243736.000	31	290496.900	6244532.000
2	291273.600	6243713.000	32	290470.300	6244510.000
3	290844.000	6243762.000	33	290165.800	6244551.000
4	290840.200	6243788.000	34	290176.900	6244630.000
5	290728.700	6244241.000	35	290290.400	6244614.000
6	290773.300	6244247.000	36	290402.300	6244599.000
7	290844.000	6243762.000	37	290458.400	6244571.000
8	290655.300	6243734.000	38	290587.900	6244571.000
9	290586.100	6244220.000	39	290603.300	6244570.000
10	290696.000	6244235.000	40	290618.700	6244568.000
11	290696.000	6244235.000	41	290672.900	6244560.000
12	290697.100	6244250.000	42	290681.500	6244559.000
13	290698.200	6244263.000	43	290690.000	6244557.000
14	290700.800	6244274.000	44	290698.300	6244554.000
15	290705.000	6244292.000	45	290707.800	6244551.000
16	290709.300	6244309.000	46	290716.700	6244548.000
17	290715.300	6244326.000	47	290729.000	6244542.000
18	290722.600	6244343.000	48	290742.400	6244535.000
19	290742.500	6244396.000	49	290750.600	6244528.000
20	290749.100	6244429.000	50	290760.600	6244518.000
21	290749.500	6244453.000	51	290772.200	6244501.000
22	290742.500	6244477.000	52	290778.800	6244477.000
23	290732.000	6244498.000	53	290784.100	6244449.000
24	290719.400	6244512.000	54	290784.100	6244416.000
25	290710.100	6244518.000	55	290778.900	6244389.000
26	290695.200	6244523.000	56	290744.700	6244312.000
27	290684.800	6244528.000	57	290740.200	6244297.000
28	290614.800	6244534.000	58	290735.400	6244277.000
29	290577.600	6244535.000	59	290730.900	6244258.000
30	290524.700	6244535.000	60	290728.700	6244241.000

Coord. Sys: GDA 1994, MGA Zone 56

Site Boundary

Point ID	Eastings	Northings	Point ID	Eastings	Northings
1	290818.065	6243293.445	34	290419.752	6244301.415
2	290805.983	6243281.133	35	290429.984	6244371.691
3	290775.981	6243281.502	36	290440.192	6244441.809
4	290743.529	6243281.903	37	290450.373	6244511.738
5	290701.304	6243246.811	38	290166.026	6244550.154
6	290623.668	6243182.292	39	290176.801	6244629.765
7	290601.294	6243163.699	40	290402.294	6244599.094
8	290510.105	6243132.406	41	290459.124	6244571.083
9	290400.859	6243094.915	42	290601.841	6244570.544
10	290397.606	6243091.805	43	290761.043	6244547.303
11	290334.951	6243031.871	44	291227.237	6244492.771
12	290324.378	6243021.758	45	291260.173	6244489.085
13	290282.199	6242970.990	46	291232.140	6244281.290
14	290253.017	6242935.868	47	291216.486	6244165.259
15	290204.764	6242907.639	48	291299.104	6244068.829
16	290206.829	6242920.491	49	291426.778	6243919.482
17	290222.211	6243019.925	50	291396.941	6243879.352
18	290237.581	6243119.292	51	291333.689	6243794.252
19	290252.951	6243218.660	52	291329.895	6243789.182
20	290268.320	6243318.028	53	291285.964	6243730.041
21	290274.506	6243357.947	54	291264.005	6243700.495
22	290286.245	6243433.714	55	291205.582	6243694.849
23	290304.254	6243550.049	56	291193.259	6243686.296
24	290315.660	6243623.732	57	291187.163	6243682.064
25	290327.005	6243697.018	58	291135.126	6243588.184
26	290338.292	6243769.929	59	291020.081	6243548.839
27	290349.520	6243842.465	60	290972.170	6243532.457
28	290360.698	6243914.674	61	290947.041	6243515.062
29	290371.812	6243986.468	62	290942.052	6243510.621
30	290382.869	6244057.896	63	290909.223	6243481.394
31	290393.873	6244128.978	64	290910.803	6243388.009
32	290406.879	6244213.000	65	290845.220	6243321.134
33	290409.493	6244230.952			

Coord Sys: GDA 1994, MGA Zone 56

Site Layout

F3

Drawing No: 0571466s_BCCDSI_G003_R1.mxd
Date: 30/09/2022 Drawing Size: A3
Drawn By: GC/FS Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 50 100 150m
N

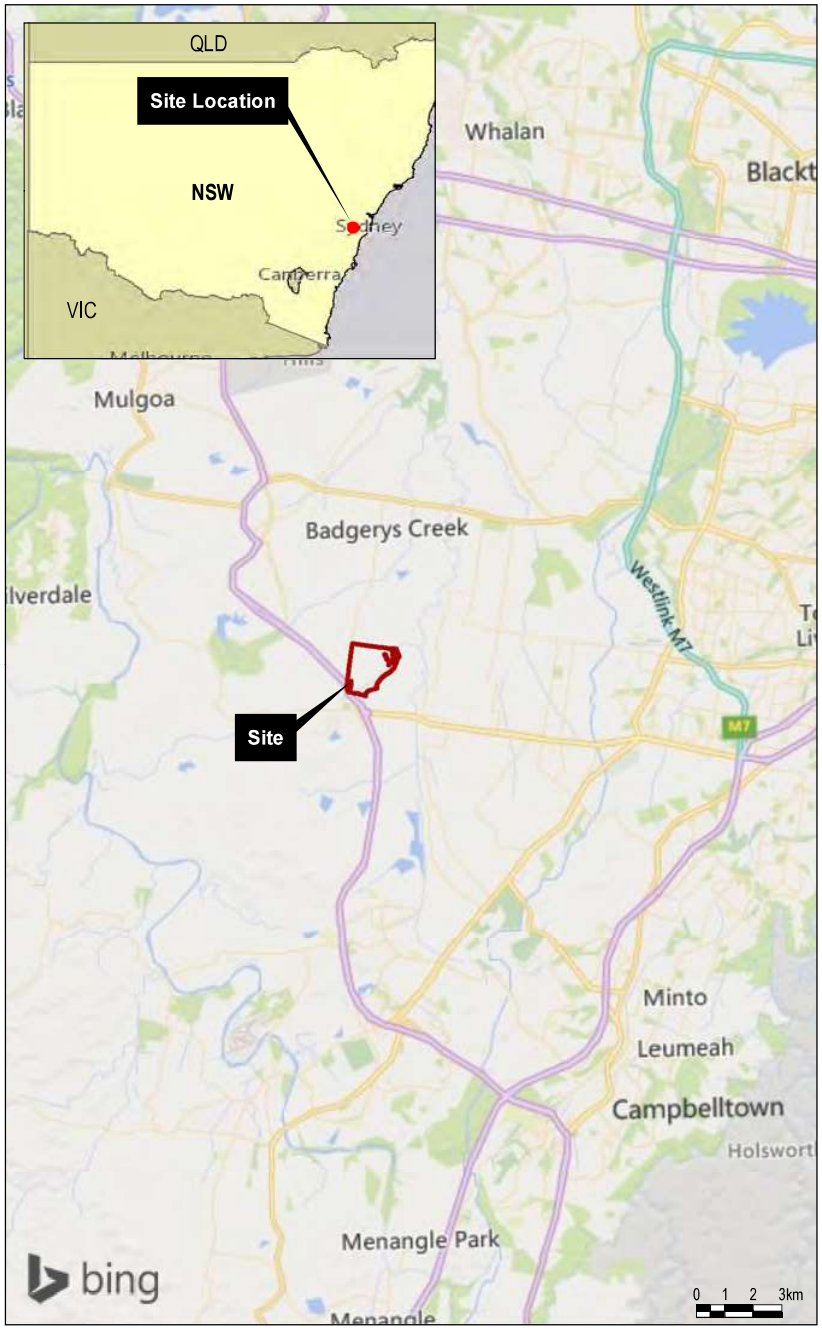
Bradfield City Centre DSI

Client: Western Parkland City Authority

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM

Appendix D Consultant's Figures



Legend

- 215 Badgerys Creek Road (Commonwealth Land)
- Adjacent Residential Land
- Site Lots (Current)

Source:
NSW DFSI - DCDB / DTDB
Nearmap Imagery : Dec 2020

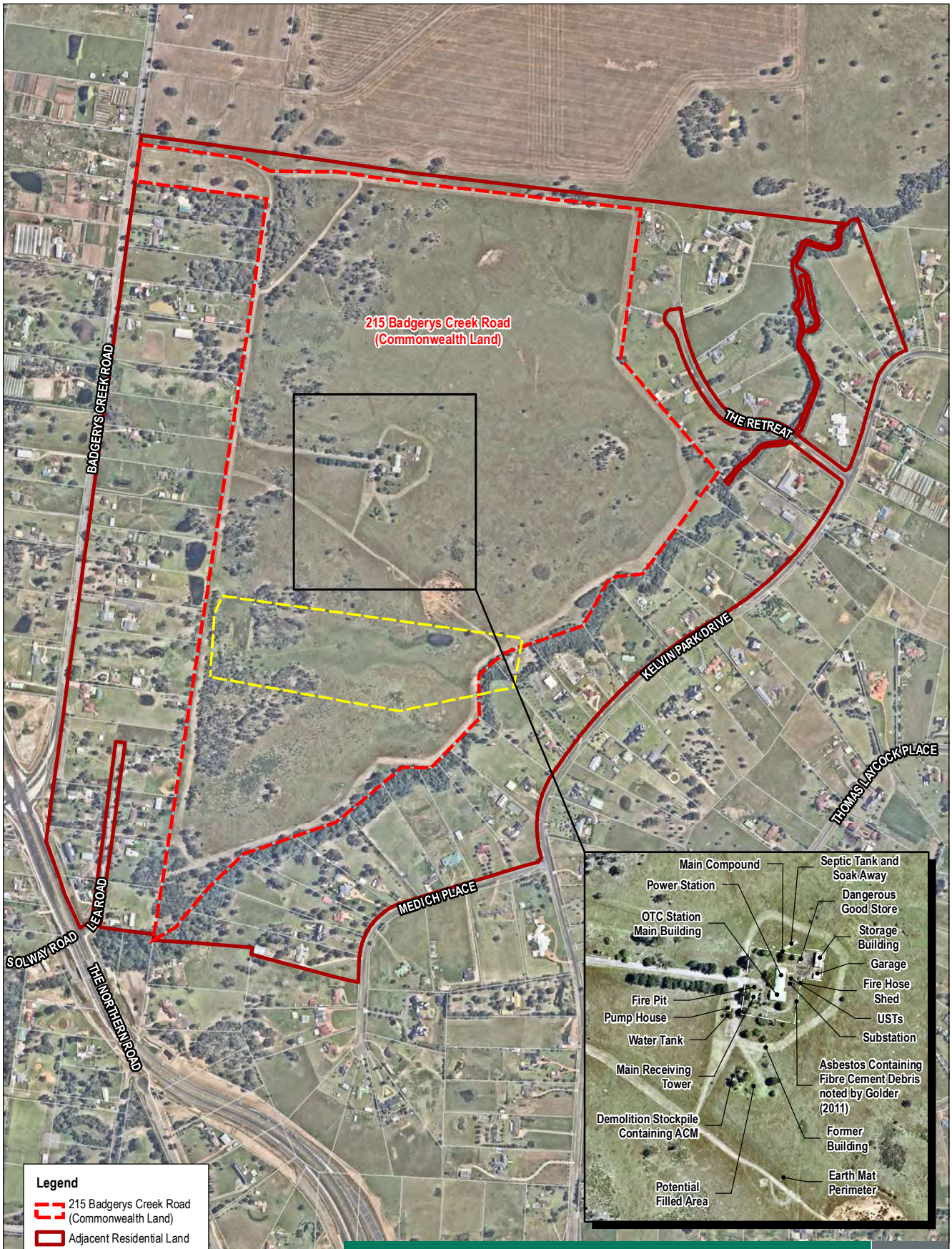
Site Location

F 1

Drawing No:	0571466m_RoC_G001_R1.mxd		**Western Sydney Aerotropolis Core Precinct Review of Contamination Issues**
Date:	03/02/2021	Drawing Size: A4	
Drawn By:	GR / GC	Reviewed By: IB	Client: Western Sydney Parkland Authority
Coordinate System: GDA 1994 MGA Zone 56			This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

N

ERM



Site Layout

F 2

Drawing No: 0571466m_RoC_G002_R0.mxd		Western Sydney Aerotropolis Core Precinct Review of Contamination Issues
Date: 03/02/2021	Drawing Size: A4	
Drawn By: GR / GC	Reviewed By: IB	Client: Western Sydney Parkland Authority

Coordinate System: GDA 1994 MGA Zone 56

0 100 200 300m

N

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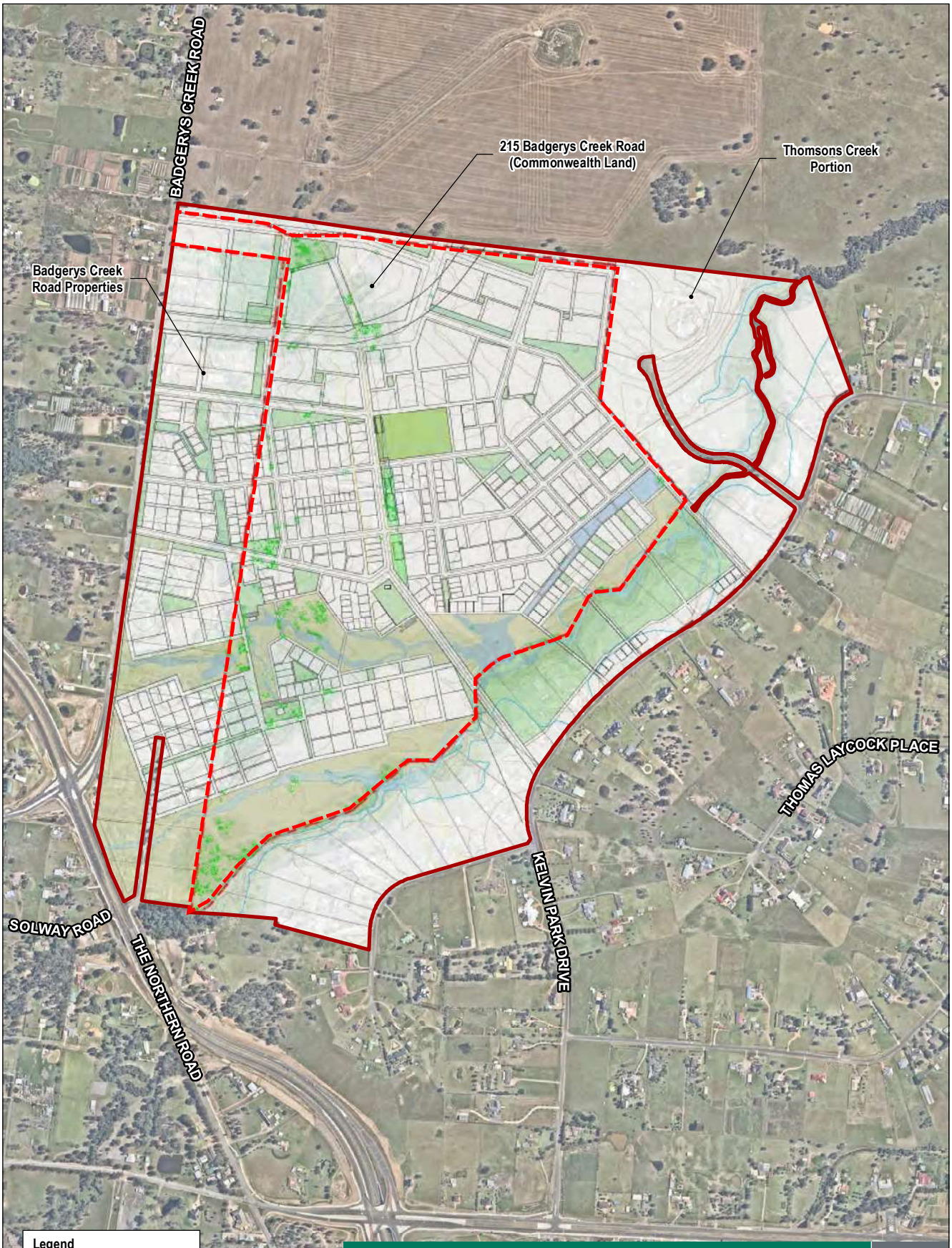
ERM



Legend

- 215 Badgerys Creek Road (Commonwealth Land)
- Adjacent Residential Land

Source:
NSW DFSI - DCDB / DTDB
Nearmap Imagery : Dec 2020

Concept Plan

F 3

Drawing No: 0571466m_RoC_G003_R0.mxd		**Western Sydney Aerotropolis Core Precinct Review of Contamination Issues**
Date: 03/02/2021	Drawing Size: A4	
Drawn By: GR	Reviewed By: IB	Client: Western Sydney Parkland Authority

Coordinate System: GDA 1994 MGA Zone 56

0 100 200 300m

N

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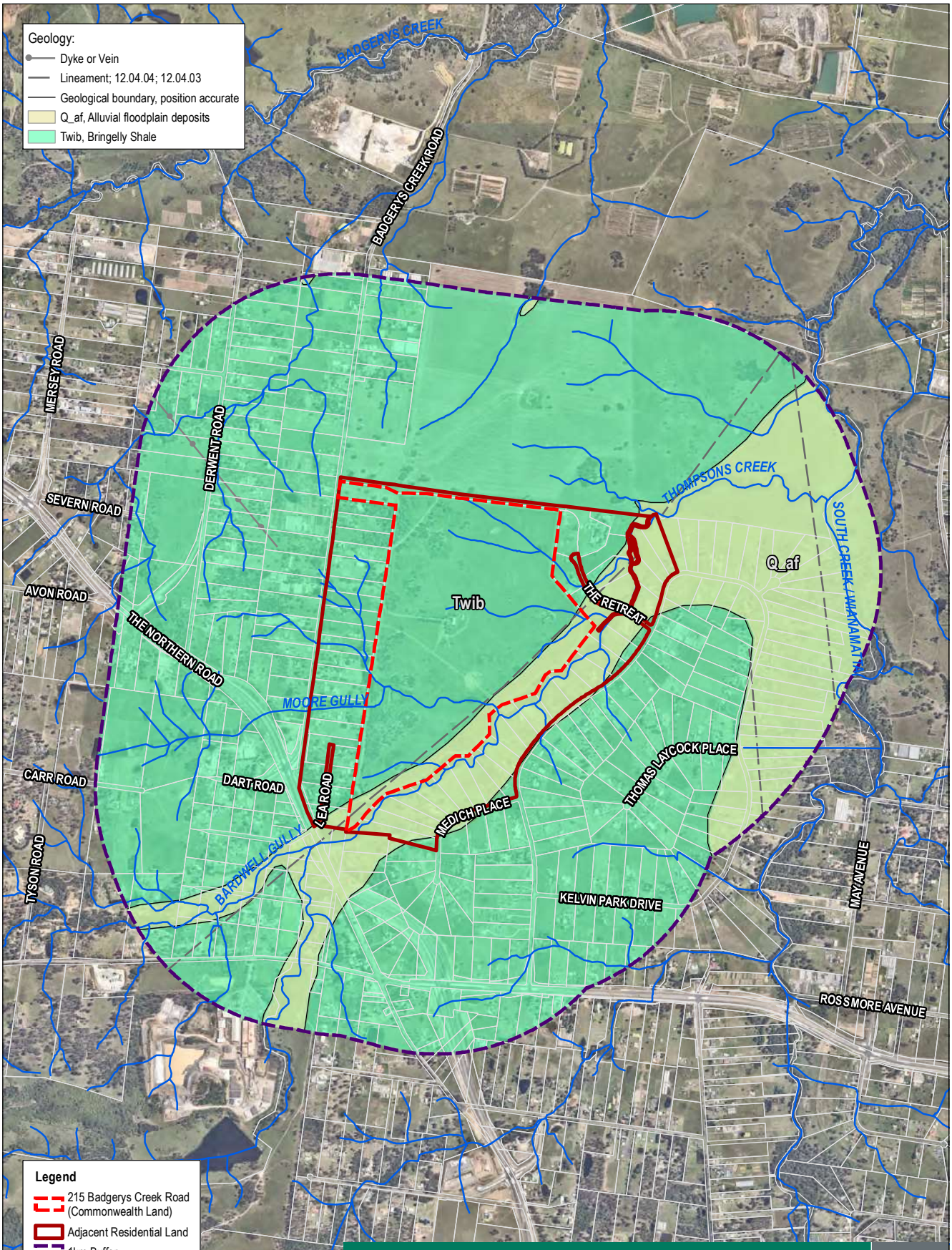
ERM



Legend

- 215 Badgerys Creek Road (Commonwealth Land)
- Adjacent Residential Land
- 1km Buffer
- Cadastre (Lot)
- Watercourses

Source:
NSW DFSI - DCDB / DTDB
Geology : GSNSW, 2018
Nearmap Imagery : Dec 2020

Geological Mapping

F 4

Drawing No: 0571466s_RoC_G004_R0.mxd		**Western Sydney Aerotropolis Core Precinct Review of Contamination Issues**
Date: 03/02/2021	Drawing Size: A4	
Drawn By: GC	Reviewed By: IB	Client: Western Sydney Parkland Authority

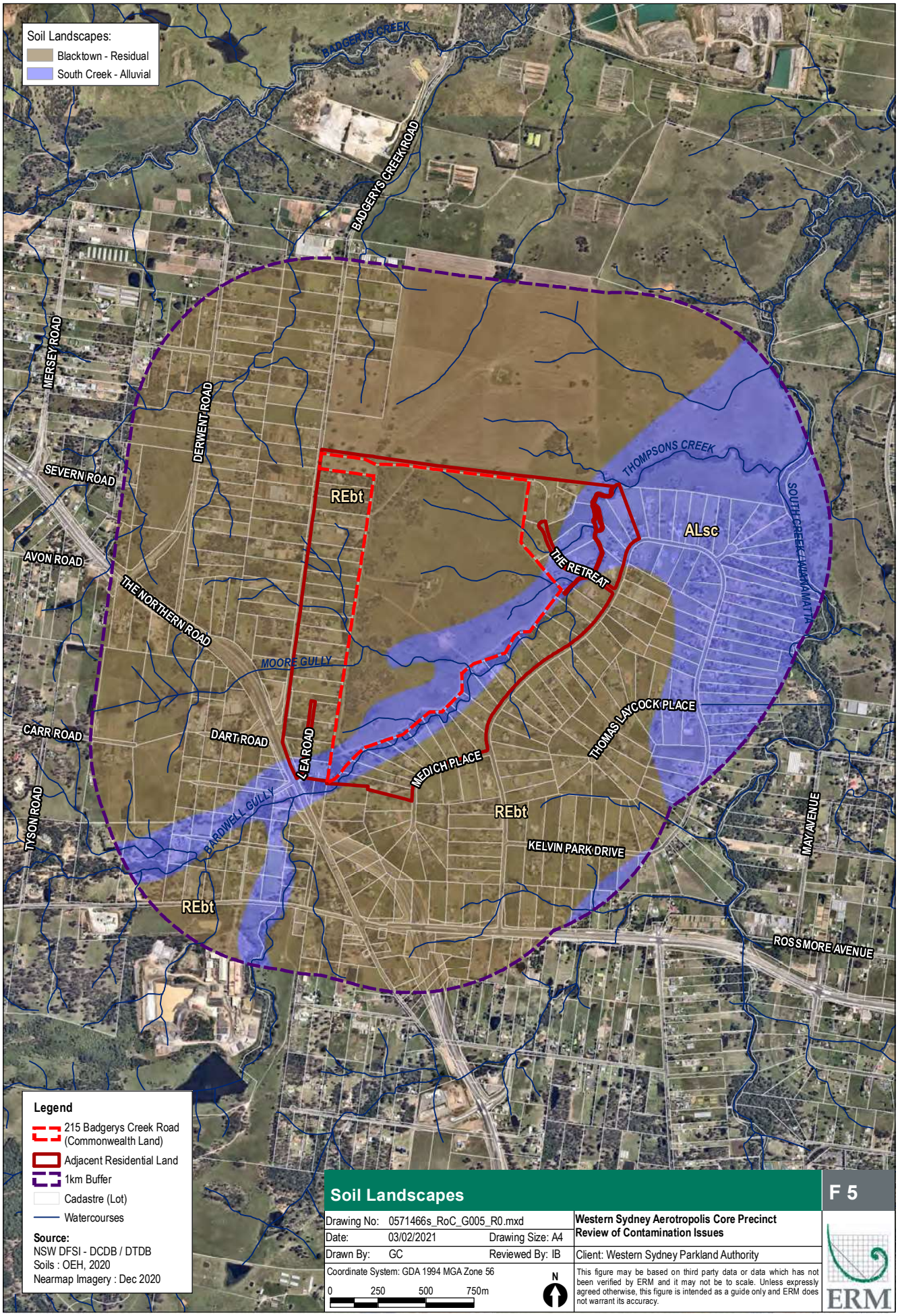
Coordinate System: GDA 1994 MGA Zone 56

0 250 500 750m

N

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM



Soil Landscapes

F 5

Drawing No: 0571466s_RoC_G005_R0.mxd		Western Sydney Aerotropolis Core Precinct Review of Contamination Issues
Date: 03/02/2021	Drawing Size: A4	
Drawn By: GC	Reviewed By: IB	Client: Western Sydney Parkland Authority

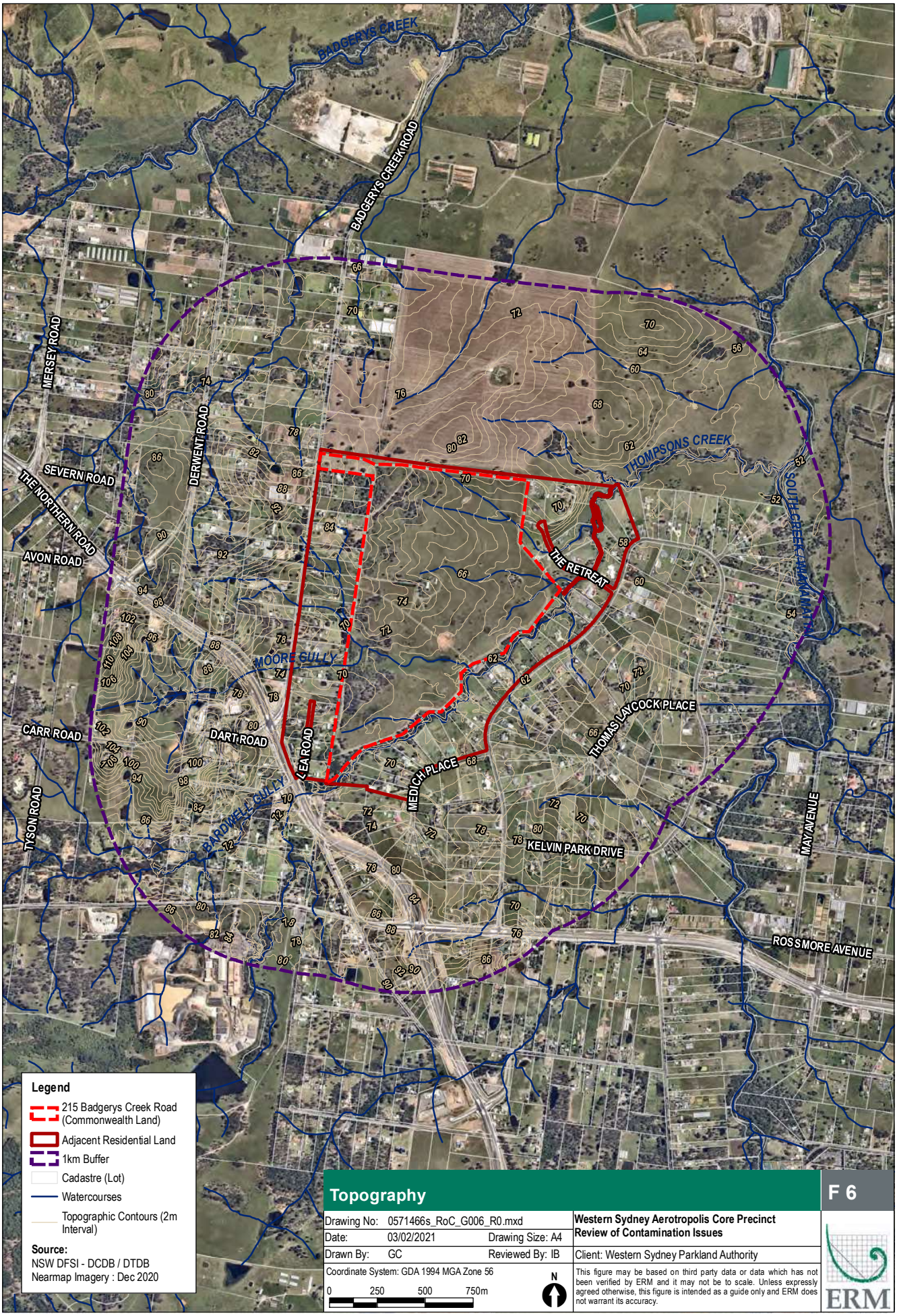
Coordinate System: GDA 1994 MGA Zone 56

0 250 500 750m

N

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM



Topography

F 6

Drawing No:	0571466s_RoC_G006_R0.mxd		Western Sydney Aerotropolis Core Precinct Review of Contamination Issues
Date:	03/02/2021	Drawing Size: A4	
Drawn By:	GC	Reviewed By: IB	Client: Western Sydney Parkland Authority

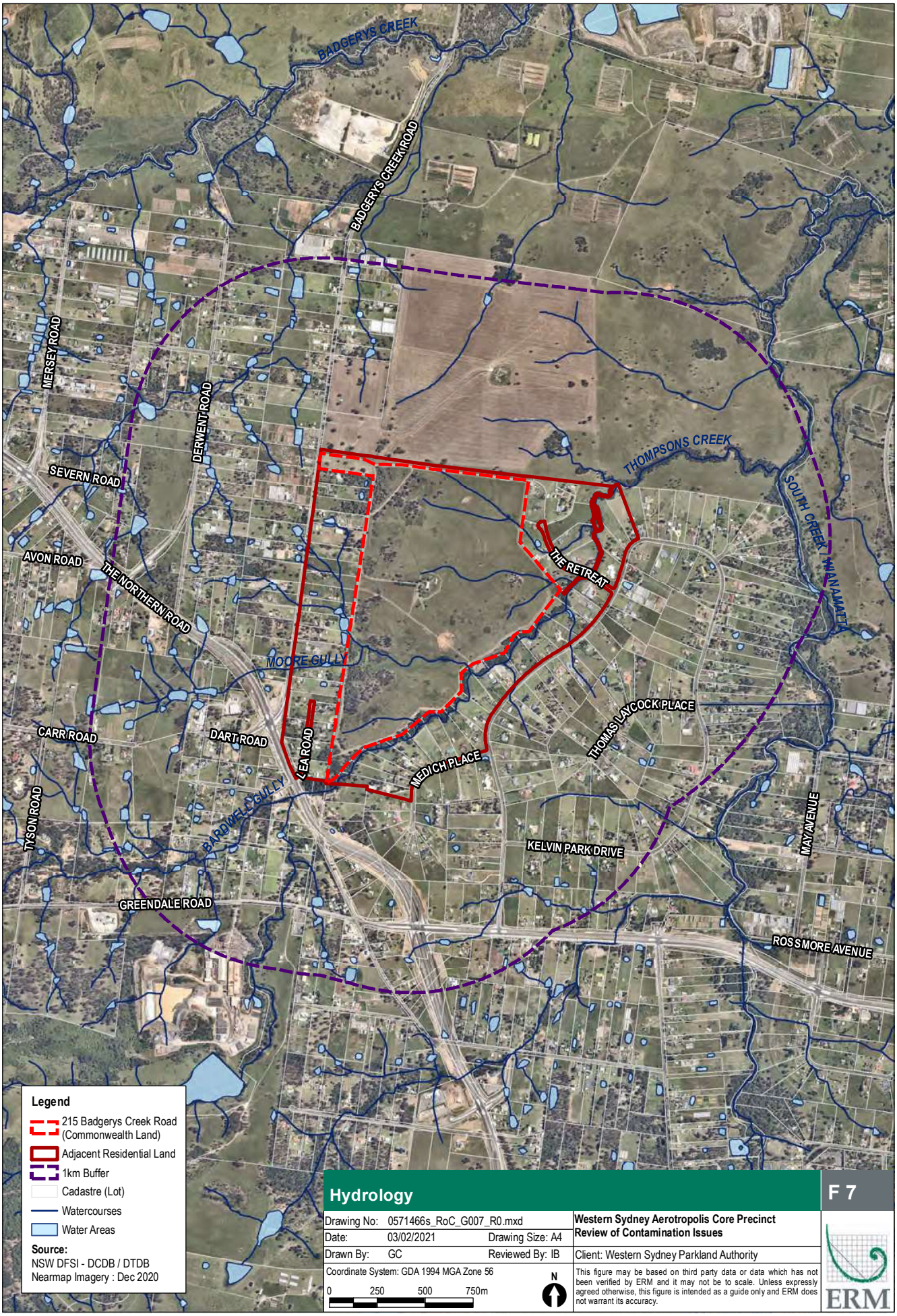
Coordinate System: GDA 1994 MGA Zone 56

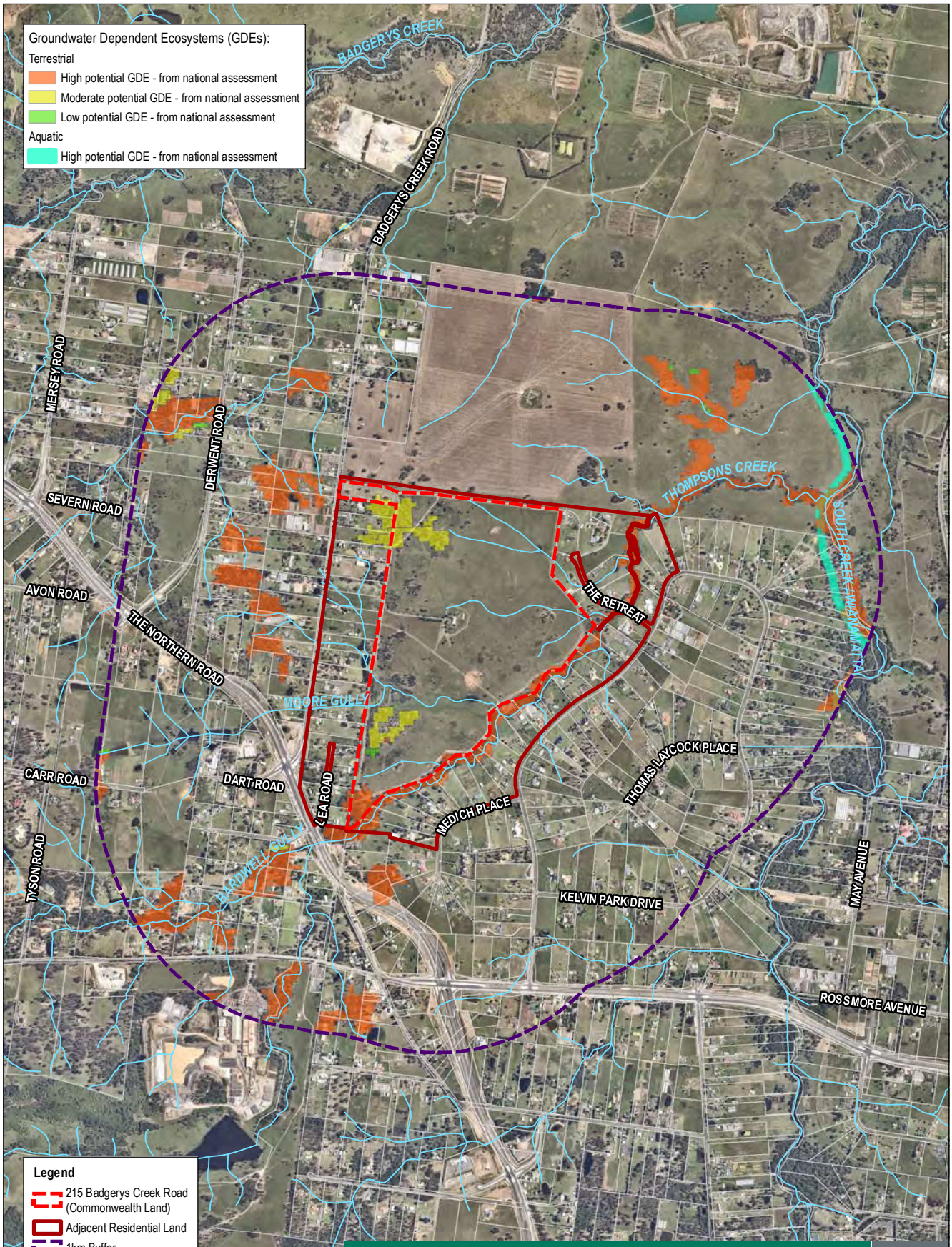
0 250 500 750m

N

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM


BADGERYS CREEK
BADGERYS CREEK ROAD
MERSEY ROAD
DERWENT ROAD
SEVERN ROAD
AVON ROAD
THE NORTHERN ROAD
THOMPSONS CREEK
SOUTH CREEK
WANANATTA
THE RETREAT
MOORE GULLY
CARR ROAD
DART ROAD
LEA ROAD
MEDICH PLACE
THOMAS LAYCOCK PLACE
TYSON ROAD
BARDWELL GULLY
KELVIN PARK DRIVE
MAY AVENUE
GREENDALE ROAD
ROSSMORE AVENUE
Legend
215 Badgerys Creek Road (Commonwealth Land)
Adjacent Residential Land
1km Buffer
Cadastre (Lot)
Watercourses
Water Areas
Source:
NSW DFSI - DCDB / DTDB
Nearmap Imagery : Dec 2020
Hydrology
F 7
Drawing No: 0571466s_RoC_G007_R0.mxd
Date: 03/02/2021
Drawing Size: A4
Drawn By: GC
Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 250 500 750m
N
Western Sydney Aerotropolis Core Precinct
Review of Contamination Issues
Client: Western Sydney Parkland Authority
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.
ERM



Legend

- 215 Badgerys Creek Road (Commonwealth Land)
- Adjacent Residential Land
- 1km Buffer
- Cadastre (Lot)
- Watercourses

Source:
NSW DFSI - DCDB / DTDB
NSW DPIE - Water : GDEs
Nearmap Imagery : Dec 2020

Groundwater Dependent Ecosystems (GDEs)

F 8

Drawing No: 0571466s_RoC_G008_R0.mxd		**Western Sydney Aerotropolis Core Precinct Review of Contamination Issues**
Date: 03/02/2021	Drawing Size: A4	
Drawn By: GC	Reviewed By: IB	Client: Western Sydney Parkland Authority

Coordinate System: GDA 1994 MGA Zone 56

0 250 500 750m

N

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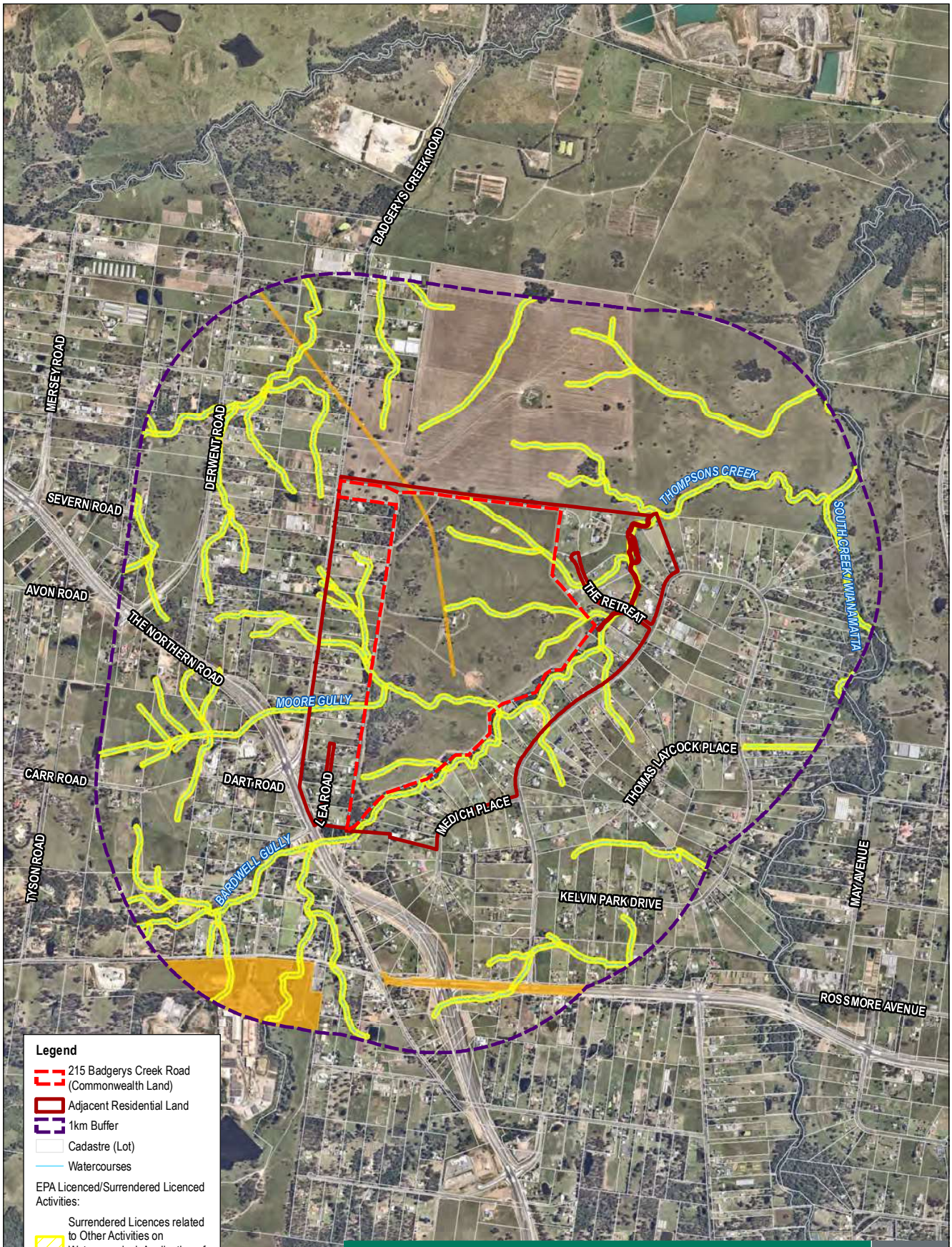
ERM



Legend

- 215 Badgerys Creek Road (Commonwealth Land)
- Adjacent Residential Land
- 1km Buffer
- Cadastre (Lot)
- Watercourses

EPA Licenced/Surrendered Licenced Activities:

- Surrendered Licences related to Other Activities on Waterways incl. Application of Herbicides
- Current Licenced Activities under POEO Act

Source:
NSW DFSI - DCDB / DTDB
Nearmap Imagery : Dec 2020

EPA Licenced Activities And Delicenced Activities

F 9

Drawing No: 0571466s_RoC_G009_R0.mxd		**Western Sydney Aerotropolis Core Precinct Review of Contamination Issues**
Date: 03/02/2021	Drawing Size: A4	
Drawn By: GC	Reviewed By: IB	Client: Western Sydney Parkland Authority

Coordinate System: GDA 1994 MGA Zone 56

0 250 500 750m

N

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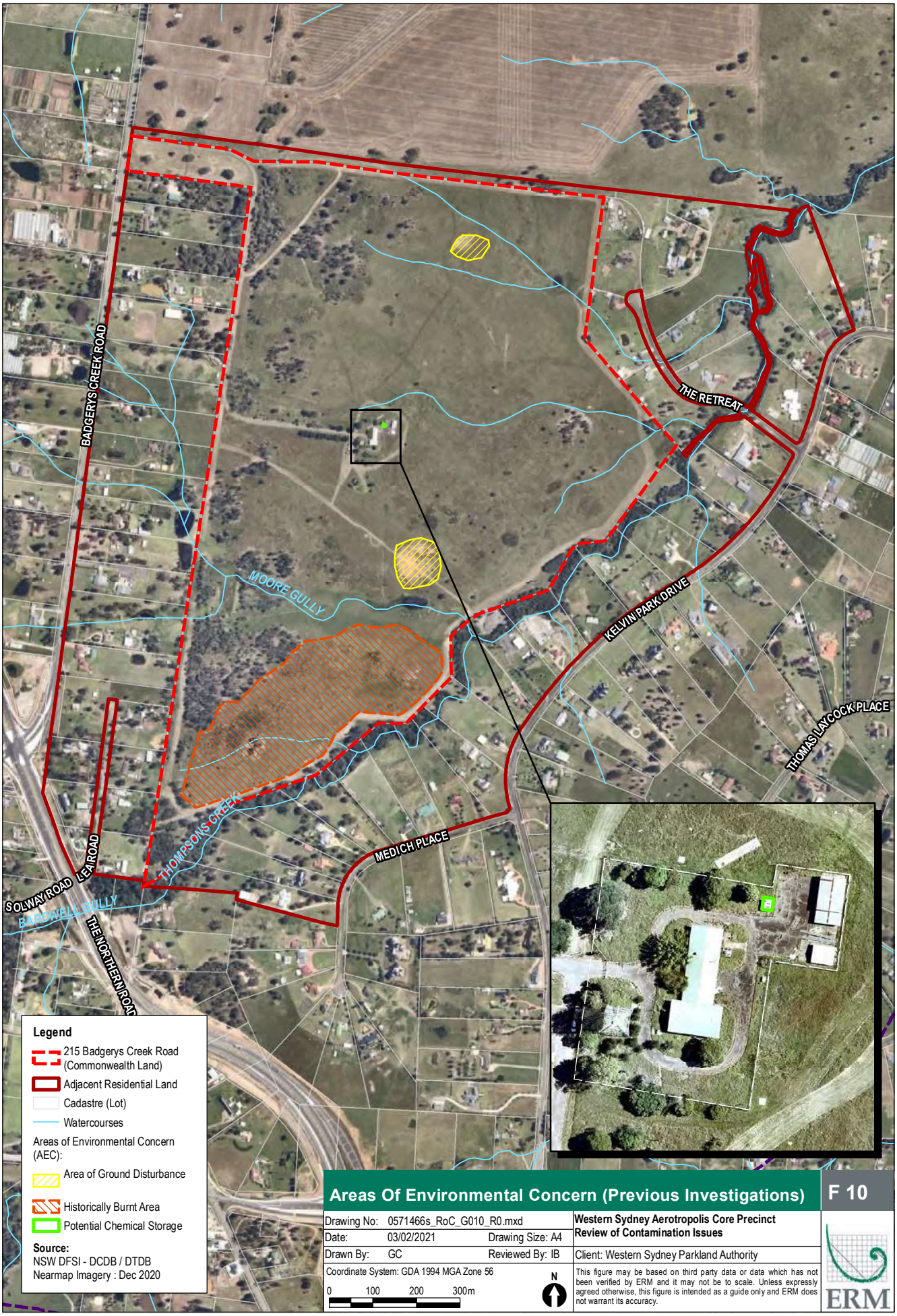
ERM



Areas Of Environmental Concern (Previous Investigations)

F 10

Drawing No: 0571466s_RoC_G010_R0.mxd		**Western Sydney Aerotropolis Core Precinct Review of Contamination Issues**
Date: 03/02/2021	Drawing Size: A4	
Drawn By: GC	Reviewed By: IB	Client: Western Sydney Parkland Authority

Coordinate System: GDA 1994 MGA Zone 56

0 100 200 300m

N

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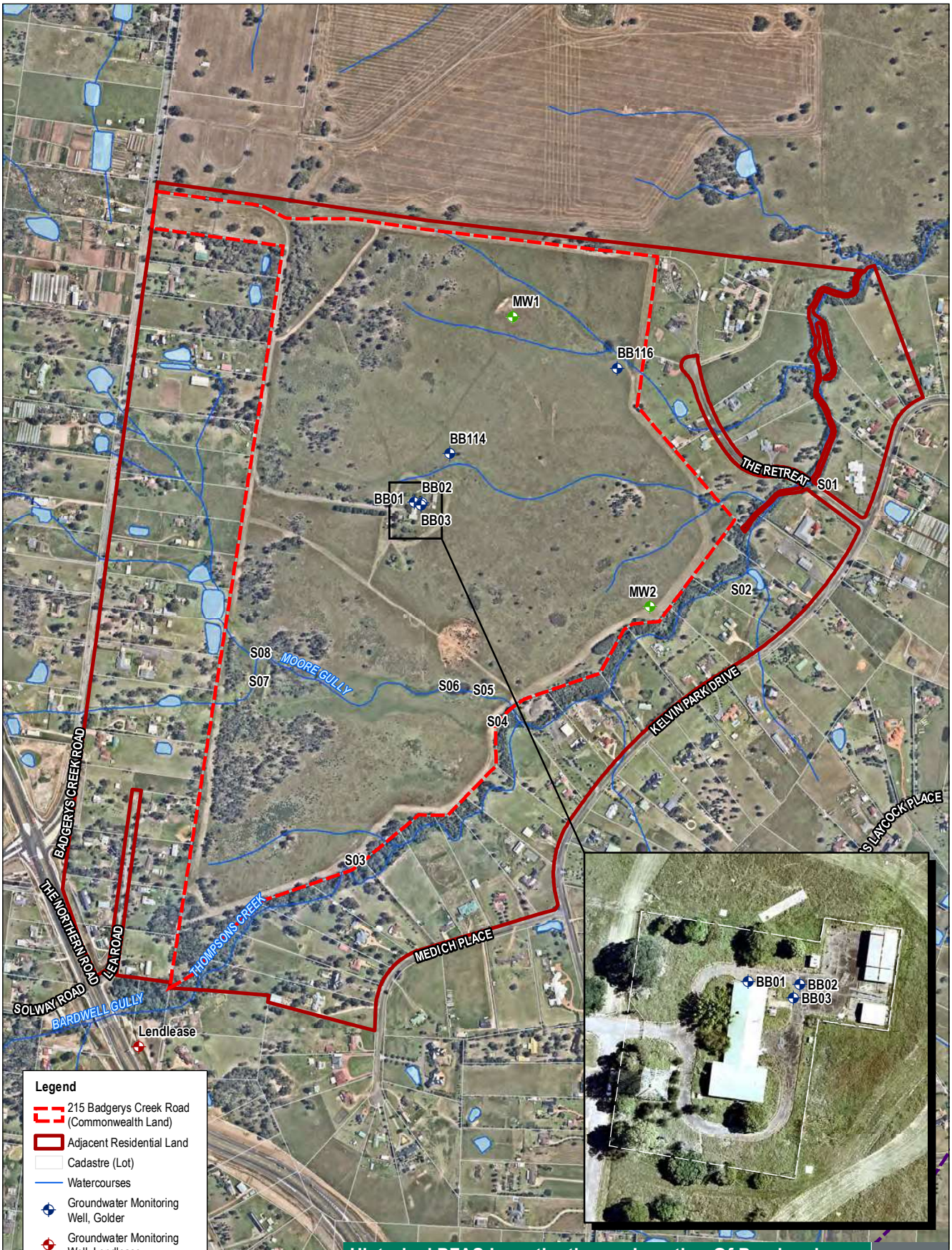
ERM



Legend

- 215 Badgerys Creek Road (Commonwealth Land)
- Adjacent Residential Land
- Cadastre (Lot)
- Watercourses
- Groundwater Monitoring Well, Golder
- Groundwater Monitoring Well, Lendlease
- Groundwater Monitoring Well, Western Environmental

Source:
NSW DFSI - DCDB / DTDB
Nearmap Imagery : Dec 2020

Historical PFAS Investigations - Location Of Previously Installed Groundwater Wells

F 11

Drawing No: 0571466s_RoC_G011_R0.mxd		**Western Sydney Aerotropolis Core Precinct Review of Contamination Issues**
Date: 03/02/2021	Drawing Size: A4	
Drawn By: GC	Reviewed By: IB	Client: Western Sydney Parkland Authority

Coordinate System: GDA 1994 MGA Zone 56

0 100 200 300m

N

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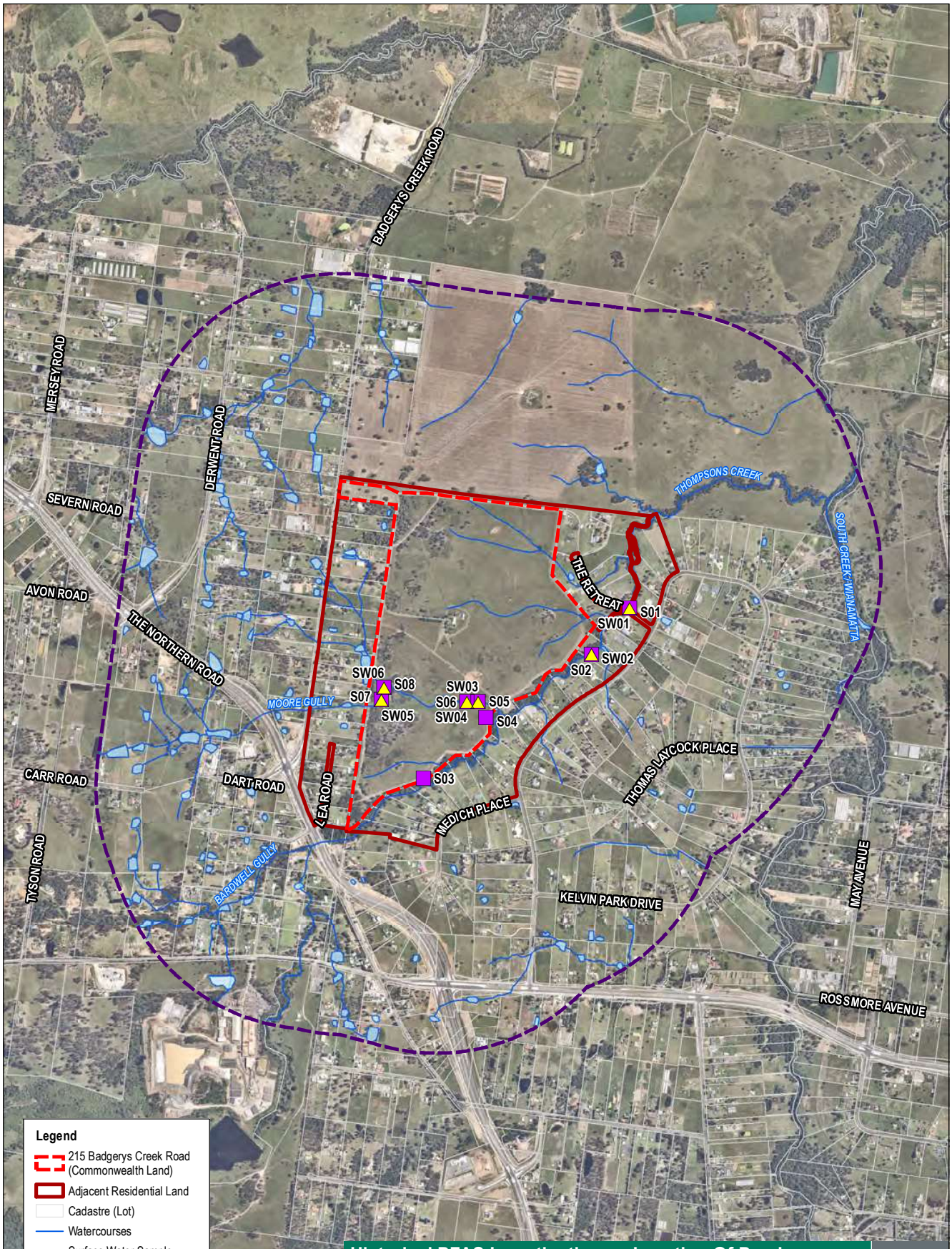
ERM



Legend

- 215 Badgerys Creek Road (Commonwealth Land)
- Adjacent Residential Land
- Cadastre (Lot)
- Watercourses
- Surface Water Sample, Western Environmental
- Sediment Sample, Western Environmental

Source:
NSW DFSI - DCDB / DTDB
Nearmap Imagery : Dec 2020

Historical PFAS Investigations - Location Of Previous Surface Water / Sediment Sampling Locations

F 12

Drawing No: 0571466s_RoC_G012_R0.mxd		**Western Sydney Aerotropolis Core Precinct Review of Contamination Issues**
Date: 03/02/2021	Drawing Size: A4	
Drawn By: GC	Reviewed By: IB	Client: Western Sydney Parkland Authority

Coordinate System: GDA 1994 MGA Zone 56

0 200 400 600 m

N

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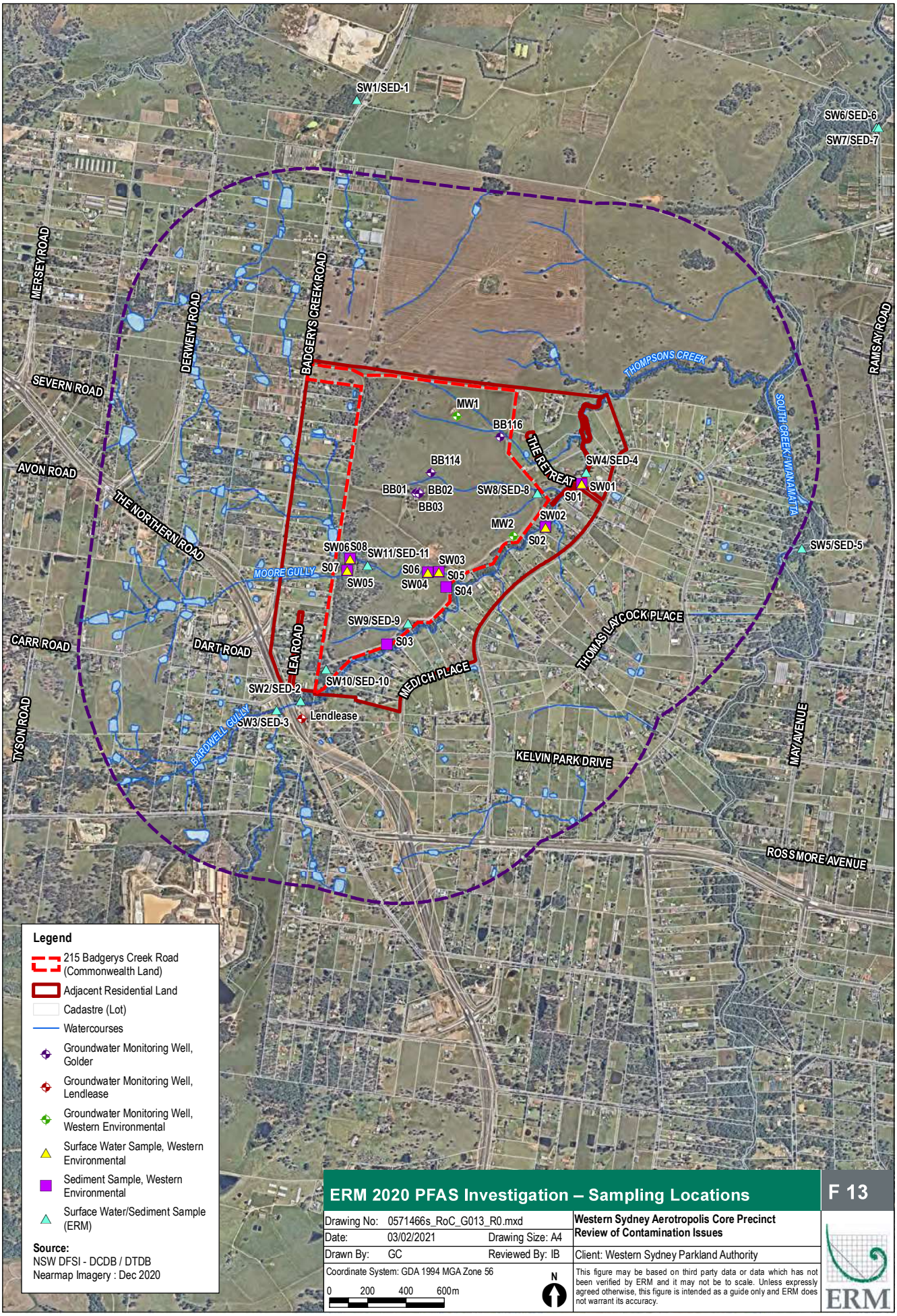
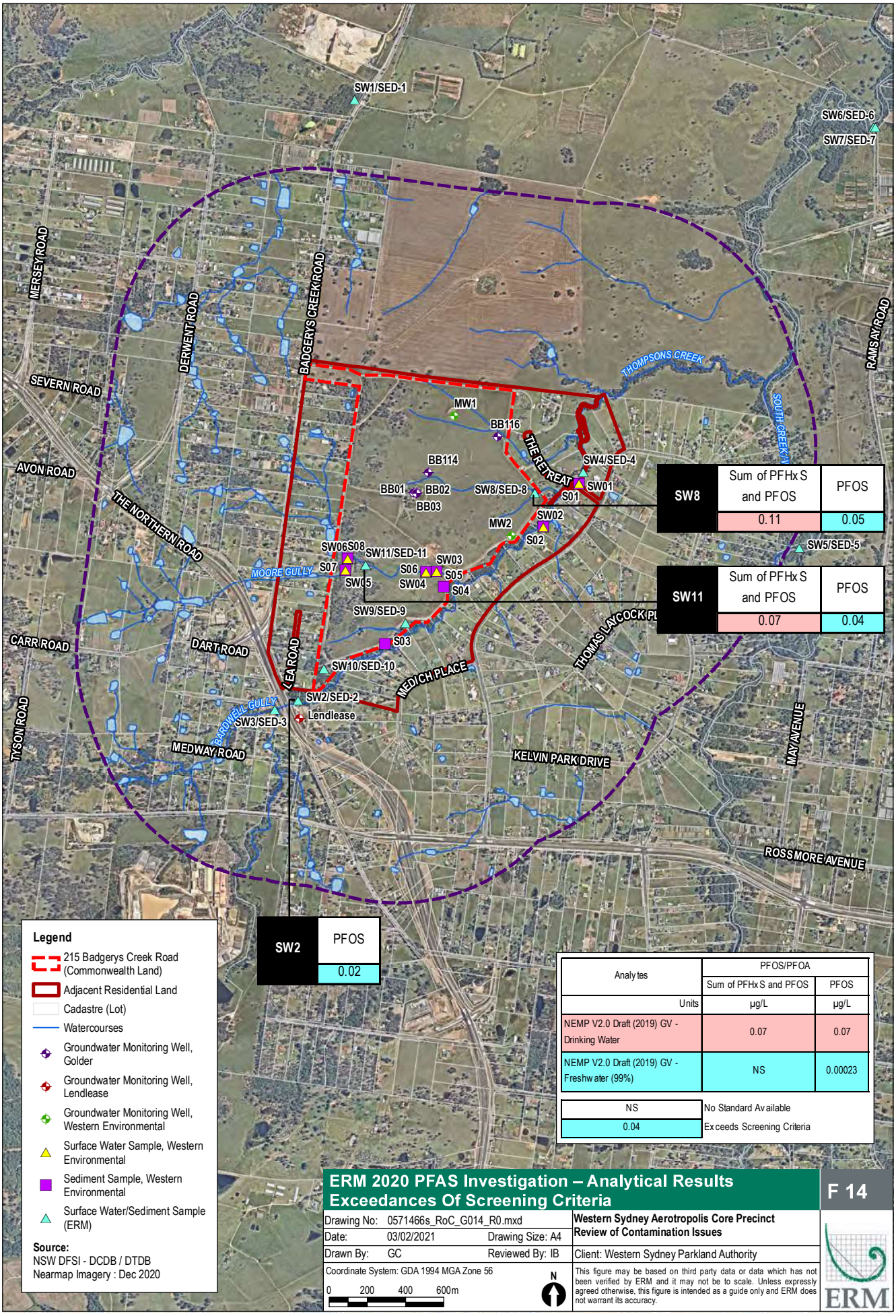
ERM


SW1/SED-1
SW6/SED-6
SW7/SED-7
MERSEY ROAD
DERWENT ROAD
BADGERYS CREEK ROAD
SEVERN ROAD
AVON ROAD
THE NORTHERN ROAD
THOMPSONS CREEK
SOUTH CREEK (WIANAMATTA)
RAMSAY ROAD
MW1
BB116
THE RETREAT
SW4/SED-4
BB114
BB01
BB02
BB03
SW8/SED-8
SW01
S01
SW02
MW2
S02
SW5/SED-5
SW06
S08
SW11/SED-11
SW03
S07
S06
S05
SW05
SW04
S04
MOORE GULLY
SW9/SED-9
S03
THOMAS LAYCOCK PLACE
CARR ROAD
DART ROAD
LEA ROAD
SW10/SED-10
MEDICH PLACE
SW2/SED-2
SW3/SED-3
Lendlease
BARDWELL GULLY
TYSON ROAD
KELVIN PARK DRIVE
MAY AVENUE
ROSSMORE AVENUE
Legend
215 Badgerys Creek Road (Commonwealth Land)
Adjacent Residential Land
Cadastre (Lot)
Watercourses
Groundwater Monitoring Well, Golder
Groundwater Monitoring Well, Lendlease
Groundwater Monitoring Well, Western Environmental
Surface Water Sample, Western Environmental
Sediment Sample, Western Environmental
Surface Water/Sediment Sample (ERM)
Source:
NSW DFSI - DCDB / DTDB
Nearmap Imagery : Dec 2020
ERM 2020 PFAS Investigation – Sampling Locations
F 13
Drawing No: 0571466s_RoC_G013_R0.mxd
Date: 03/02/2021
Drawing Size: A4
Drawn By: GC
Reviewed By: IB
Western Sydney Aerotropolis Core Precinct
Review of Contamination Issues
Client: Western Sydney Parkland Authority
Coordinate System: GDA 1994 MGA Zone 56
0 200 400 600m
N
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.
ERM



Analytes	PFOS/PFOA	
	Sum of PFHxS and PFOS	PFOS
Units	µg/L	µg/L
NEMP V2.0 Draft (2019) GV - Drinking Water	0.07	0.07
NEMP V2.0 Draft (2019) GV - Freshwater (99%)	NS	0.00023

NS	No Standard Available
0.04	Exceeds Screening Criteria

ERM 2020 PFAS Investigation – Analytical Results Exceedances Of Screening Criteria

F 14

Drawing No: 0571466s_RoC_G014_R0.mxd
Date: 03/02/2021 Drawing Size: A4
Drawn By: GC Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56

Western Sydney Aerotropolis Core Precinct Review of Contamination Issues

Client: Western Sydney Parkland Authority

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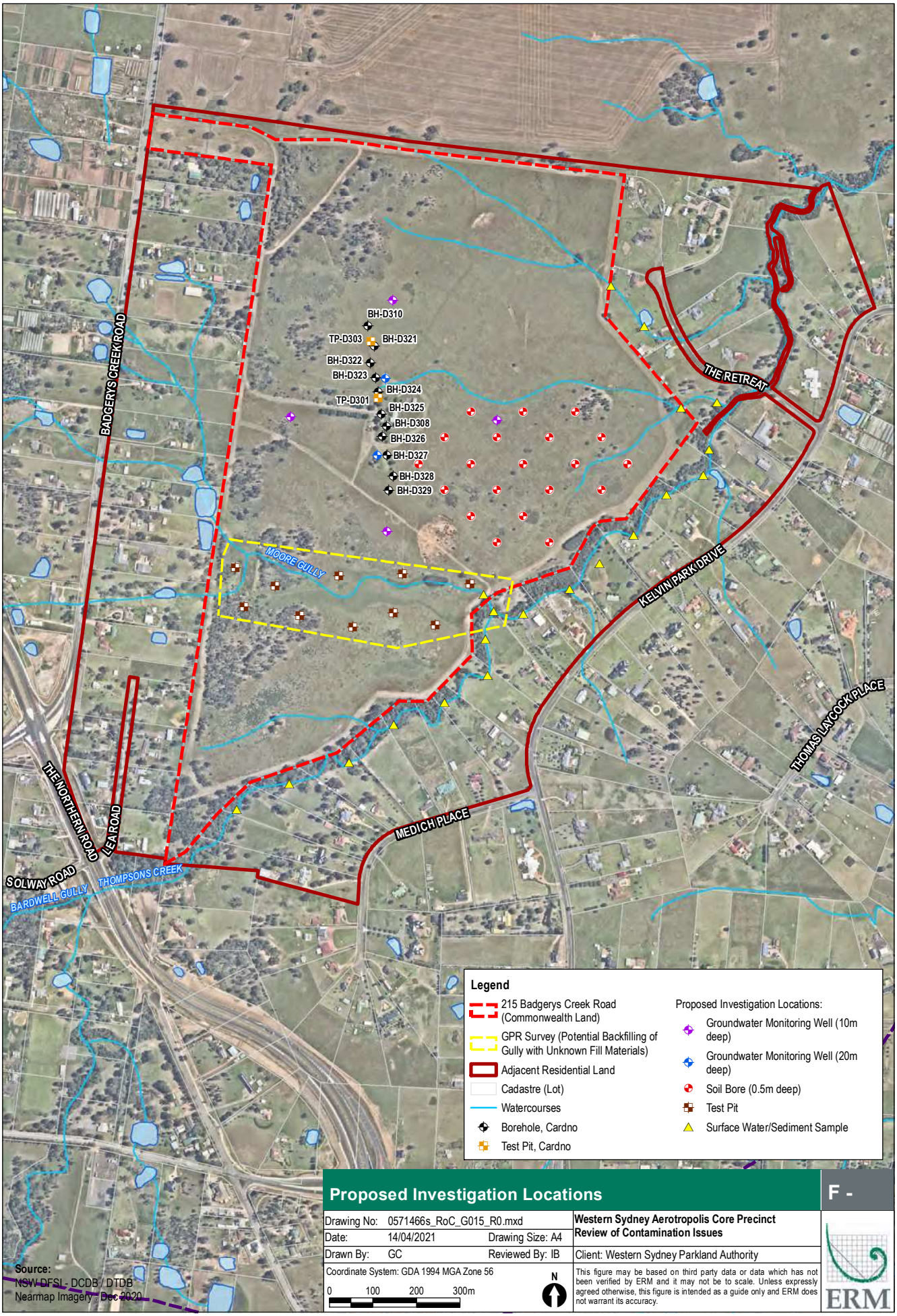
ERM


BH-D310
TP-D303
BH-D321
BH-D322
BH-D323
BH-D324
TP-D301
BH-D325
BH-D308
BH-D326
BH-D327
BH-D328
BH-D329
BADGERYS CREEK ROAD
THE RETREAT
MOORE GULLY
KELVIN PARK DRIVE
THOMAS LAYCOCK PLACE
THE NORTHERN ROAD
LEA ROAD
MEDICI PLACE
SOLWAY ROAD
THOMPSONS CREEK
BARDWELL GULLY
Legend
215 Badgerys Creek Road (Commonwealth Land)
GPR Survey (Potential Backfilling of Gully with Unknown Fill Materials)
Adjacent Residential Land
Cadastre (Lot)
Watercourses
Borehole, Cardno
Test Pit, Cardno
Proposed Investigation Locations:
Groundwater Monitoring Well (10m deep)
Groundwater Monitoring Well (20m deep)
Soil Bore (0.5m deep)
Test Pit
Surface Water/Sediment Sample
Source:
NSW DFSI - DCDB / DTDB
Nearmap Imagery - Dec 2020
Proposed Investigation Locations
F -
Drawing No: 0571466s_RoC_G015_R0.mxd
Date: 14/04/2021
Drawing Size: A4
Drawn By: GC
Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 100 200 300m
N
Western Sydney Aerotropolis Core Precinct
Review of Contamination Issues
Client: Western Sydney Parkland Authority
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.
ERM

Point ID	Easting	Northing
1	290818.07	6243293.44
2	290805.98	6243281.13
3	290775.98	6243281.50
4	290743.53	6243281.90
5	290701.30	6243246.81
6	290623.67	6243182.29
7	290601.29	6243163.70
8	290510.10	6243132.41
9	290400.86	6243094.92
10	290397.61	6243091.80
11	290334.95	6243031.87
12	290324.38	6243021.76
13	290282.20	6242970.99
14	290253.02	6242935.87
15	290204.76	6242907.64
16	290206.83	6242920.49
17	290222.21	6243019.92
18	290237.58	6243119.29
19	290252.95	6243218.66
20	290268.32	6243318.03
21	290274.51	6243357.95
22	290286.25	6243433.71
23	290304.25	6243550.05
24	290315.66	6243623.73
25	290327.00	6243697.02
26	290338.29	6243769.93
27	290349.52	6243842.46
28	290360.70	6243914.67
29	290371.81	6243986.47
30	290382.87	6244057.90
31	290393.87	6244128.98
32	290406.88	6244213.00
33	290409.49	6244230.95
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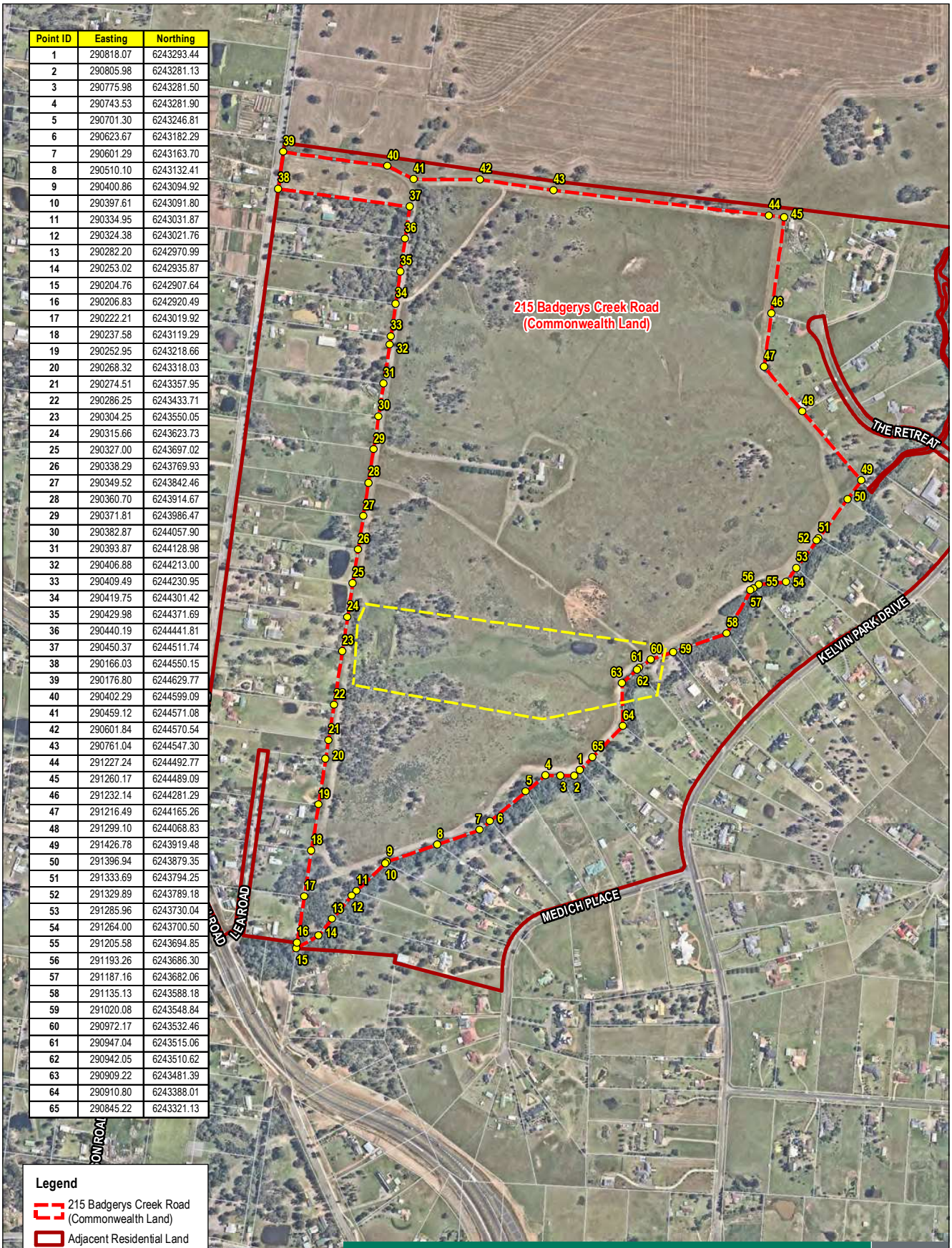
39	290176.80	6244629.77
40	290402.29	6244599.09
41	290459.12	6244571.08
42	290601.84	6244570.54
43	290761.04	6244547.30
44	291227.24	6244492.77
45	291260.17	6244489.09
46	291232.14	6244281.29
47	291216.49	6244165.26
48	291299.10	6244068.83
49	291426.78	6243919.48
50	291396.94	6243879.35
51	291333.69	6243794.25
52	291329.89	6243789.18
53	291285.96	6243730.04
54	291264.00	6243700.50
55	291205.58	6243694.85
56	291193.26	6243686.30
57	291187.16	6243682.06
58	291135.13	6243588.18
59	291020.08	6243548.84
60	290972.17	6243532.46
61	290947.04	6243515.06
62	290942.05	6243510.62
63	290909.22	6243481.39
64	290910.80	6243388.01
65	290845.22	6243321.13



Legend

- 215 Badgerys Creek Road (Commonwealth Land)
- Adjacent Residential Land
- Potential Backfilling of Gully with Unknown Fill Materials
- Cadastre (Lot)

Source:
NSW DFSI - DCDB / DTDB
Nearmap Imagery : Dec 2020

Site Layout

F 1

Drawing No: 0571466s_RoC_G016_R0.mxd		**Western Sydney Aerotropolis Core Precinct**
Date: 17/06/2021	Drawing Size: A4	
Drawn By: GC	Reviewed By: IB	Client: Western Sydney Parkland Authority

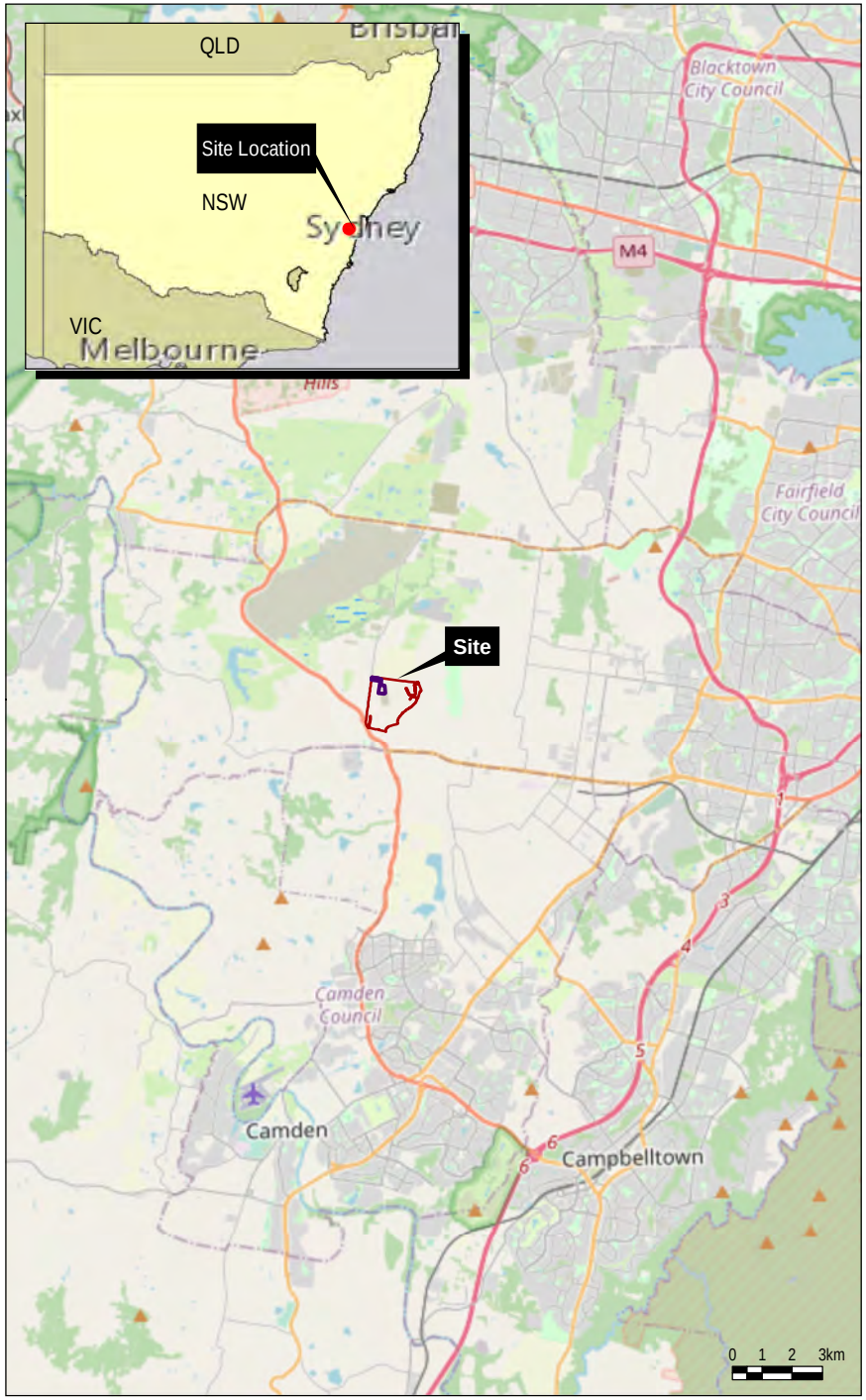
Coordinate System: GDA 1994 MGA Zone 56

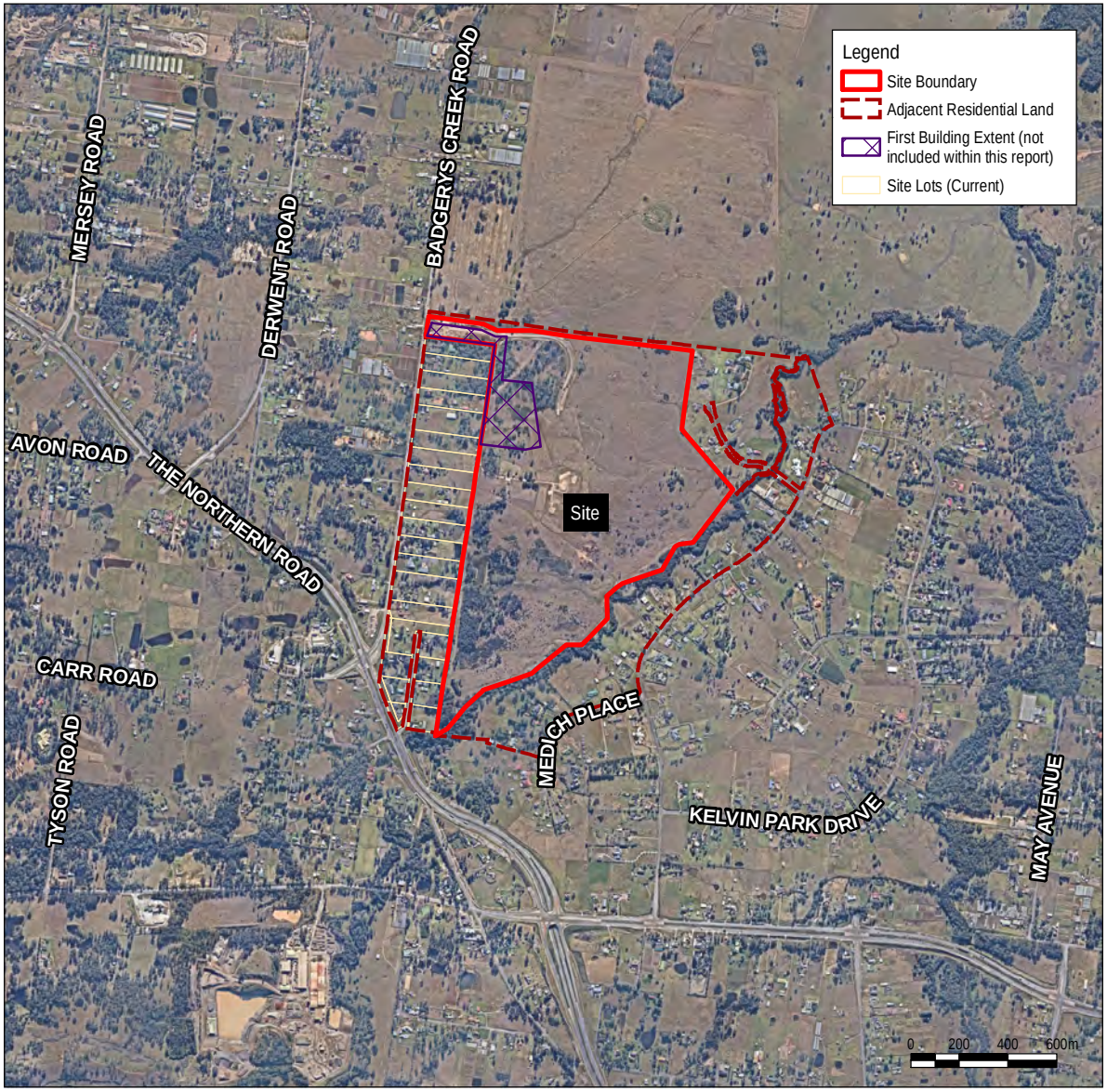
0 100 200 300m

N

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

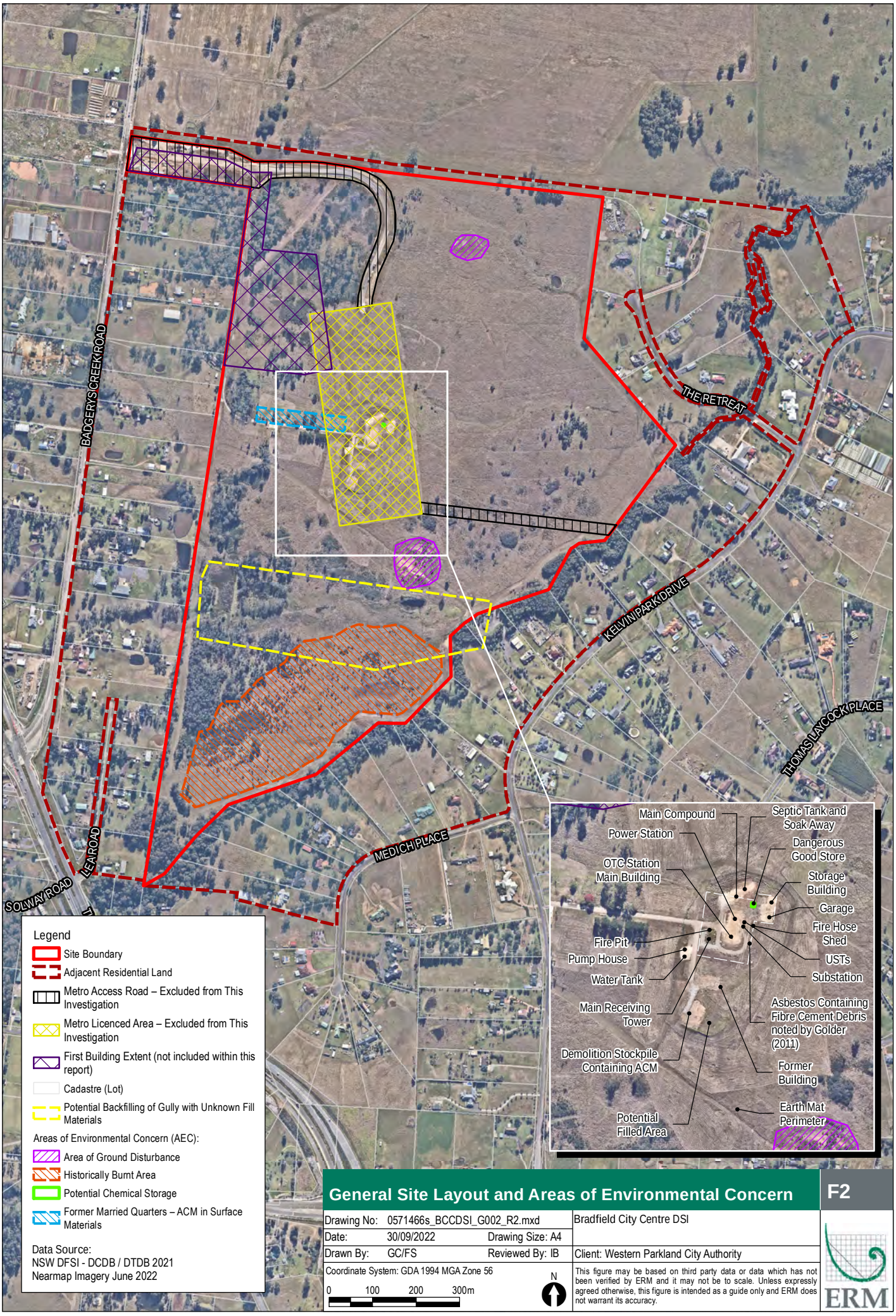
ERM





Data Source:
NSW DFSI - DCDB / DTDB 2021
Nearmap Imagery June 2022
Esri OpenStreetMap 2022

Site Location			F1
Drawing No: 0571466s_BCCDSI_G001_R0.mxd		Bradfield City Centre DSI	
Date: 26/07/2022	Drawing Size: A4		
Drawn By: GC	Reviewed By: IB	Client: Western Parkland City Authority	
Coordinate System: GDA 1994 MGA Zone 56 N		This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.	ERM



General Site Layout and Areas of Environmental Concern

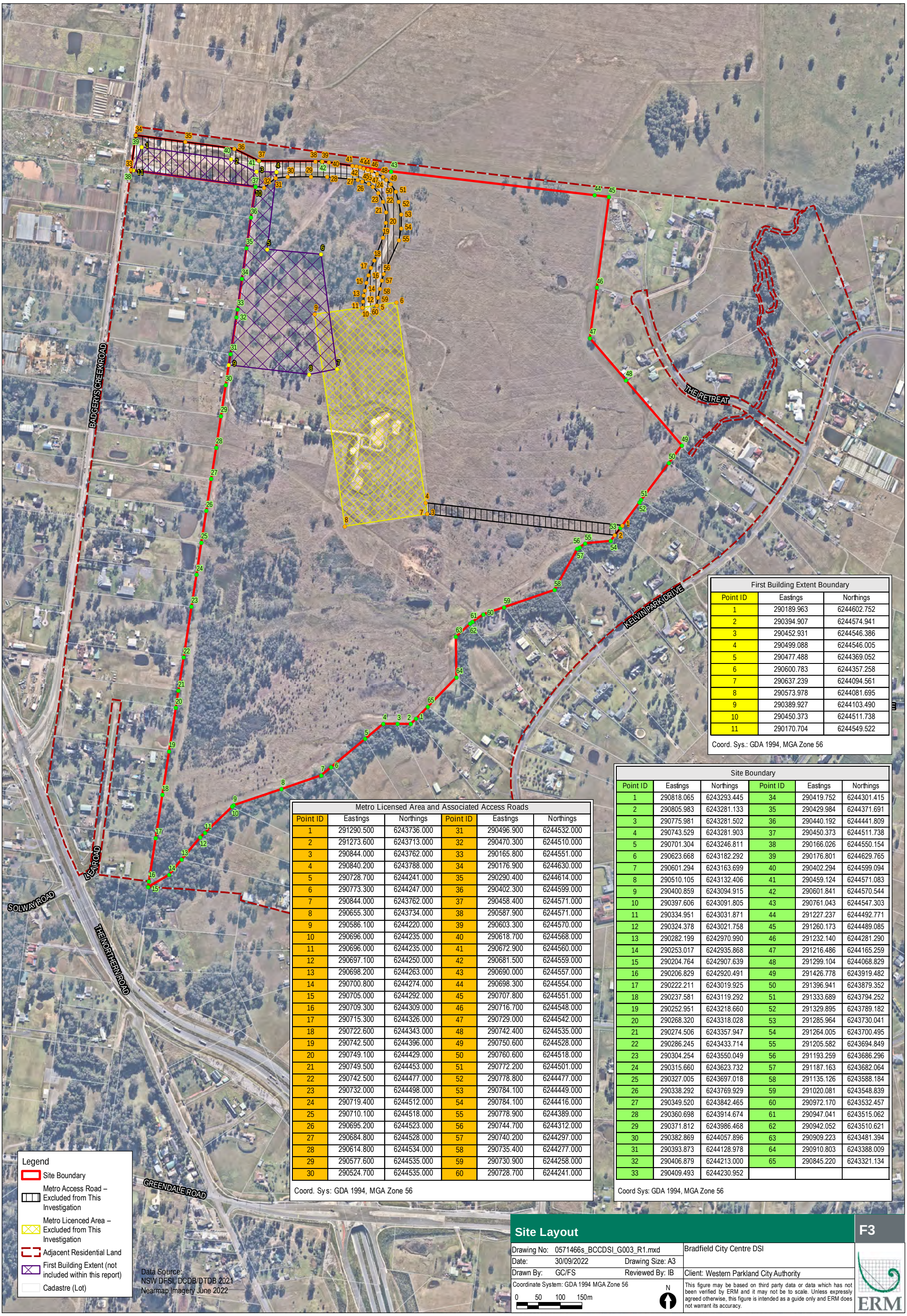
F2

Drawing No: 0571466s_BCCDSI_G002_R2.mxd		Bradfield City Centre DSI
Date: 30/09/2022	Drawing Size: A4	
Drawn By: GC/FS	Reviewed By: IB	Client: Western Parkland City Authority

Coordinate System: GDA 1994 MGA Zone 56

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM



First Building Extent Boundary		
Point ID	Eastings	Northings
1	290189.963	6244602.752
2	290394.907	6244574.941
3	290452.931	6244546.386
4	290499.088	6244546.005
5	290477.488	6244369.052
6	290600.783	6244357.258
7	290637.239	6244094.561
8	290573.978	6244081.695
9	290389.927	6244103.490
10	290450.373	6244511.738
11	290170.704	6244549.522

Coord. Sys.: GDA 1994, MGA Zone 56

Metro Licensed Area and Associated Access Roads					
Point ID	Eastings	Northings	Point ID	Eastings	Northings
1	291290.500	6243736.000	31	290496.900	6244532.000
2	291273.600	6243713.000	32	290470.300	6244510.000
3	290844.000	6243762.000	33	290165.800	6244551.000
4	290840.200	6243788.000	34	290176.900	6244630.000
5	290728.700	6244241.000	35	290290.400	6244614.000
6	290773.300	6244247.000	36	290402.300	6244599.000
7	290844.000	6243762.000	37	290458.400	6244571.000
8	290655.300	6243734.000	38	290587.900	6244571.000
9	290586.100	6244220.000	39	290603.300	6244570.000
10	290696.000	6244235.000	40	290618.700	6244568.000
11	290696.000	6244235.000	41	290672.900	6244560.000
12	290697.100	6244250.000	42	290681.500	6244559.000
13	290698.200	6244263.000	43	290690.000	6244557.000
14	290700.800	6244274.000	44	290698.300	6244554.000
15	290705.000	6244292.000	45	290707.800	6244551.000
16	290709.300	6244309.000	46	290716.700	6244548.000
17	290715.300	6244326.000	47	290729.000	6244542.000
18	290722.600	6244343.000	48	290742.400	6244535.000
19	290742.500	6244396.000	49	290750.600	6244528.000
20	290749.100	6244429.000	50	290760.600	6244518.000
21	290749.500	6244453.000	51	290772.200	6244501.000
22	290742.500	6244477.000	52	290778.800	6244477.000
23	290732.000	6244498.000	53	290784.100	6244449.000
24	290719.400	6244512.000	54	290784.100	6244416.000
25	290710.100	6244518.000	55	290778.900	6244389.000
26	290695.200	6244523.000	56	290744.700	6244312.000
27	290684.800	6244528.000	57	290740.200	6244297.000
28	290614.800	6244534.000	58	290735.400	6244277.000
29	290577.600	6244535.000	59	290730.900	6244258.000
30	290524.700	6244535.000	60	290728.700	6244241.000

Coord. Sys: GDA 1994, MGA Zone 56

Site Boundary					
Point ID	Eastings	Northings	Point ID	Eastings	Northings
1	290818.065	6243293.445	34	290419.752	6244301.415
2	290805.983	6243281.133	35	290429.984	6244371.691
3	290775.981	6243281.502	36	290440.192	6244441.809
4	290743.529	6243281.903	37	290450.373	6244511.738
5	290701.304	6243246.811	38	290166.026	6244550.154
6	290623.668	6243182.292	39	290176.801	6244629.765
7	290601.294	6243163.699	40	290402.294	6244599.094
8	290510.105	6243132.406	41	290459.124	6244571.083
9	290400.859	6243094.915	42	290601.841	6244570.544
10	290397.606	6243091.805	43	290761.043	6244547.303
11	290334.951	6243031.871	44	291227.237	6244492.771
12	290324.378	6243021.758	45	291260.173	6244489.085
13	290282.199	6242970.990	46	291232.140	6244281.290
14	290253.017	6242935.868	47	291216.486	6244165.259
15	290204.764	6242907.639	48	291299.104	6244068.829
16	290206.829	6242920.491	49	291426.778	6243919.482
17	290222.211	6243019.925	50	291396.941	6243879.352
18	290237.581	6243119.292	51	291333.689	6243794.252
19	290252.951	6243218.660	52	291329.895	6243789.182
20	290268.320	6243318.028	53	291285.964	6243730.041
21	290274.506	6243357.947	54	291264.005	6243700.495
22	290286.245	6243433.714	55	291205.582	6243694.849
23	290304.254	6243550.049	56	291193.259	6243686.296
24	290315.660	6243623.732	57	291187.163	6243682.064
25	290327.005	6243697.018	58	291135.126	6243588.184
26	290338.292	6243769.929	59	291020.081	6243548.839
27	290349.520	6243842.465	60	290972.170	6243532.457
28	290360.698	6243914.674	61	290947.041	6243515.062
29	290371.812	6243986.468	62	290942.052	6243510.621
30	290382.869	6244057.896	63	290909.223	6243481.394
31	290393.873	6244128.978	64	290910.803	6243388.009
32	290406.879	6244213.000	65	290845.220	6243321.134
33	290409.493	6244230.952			

Coord Sys: GDA 1994, MGA Zone 56

Site Layout

F3

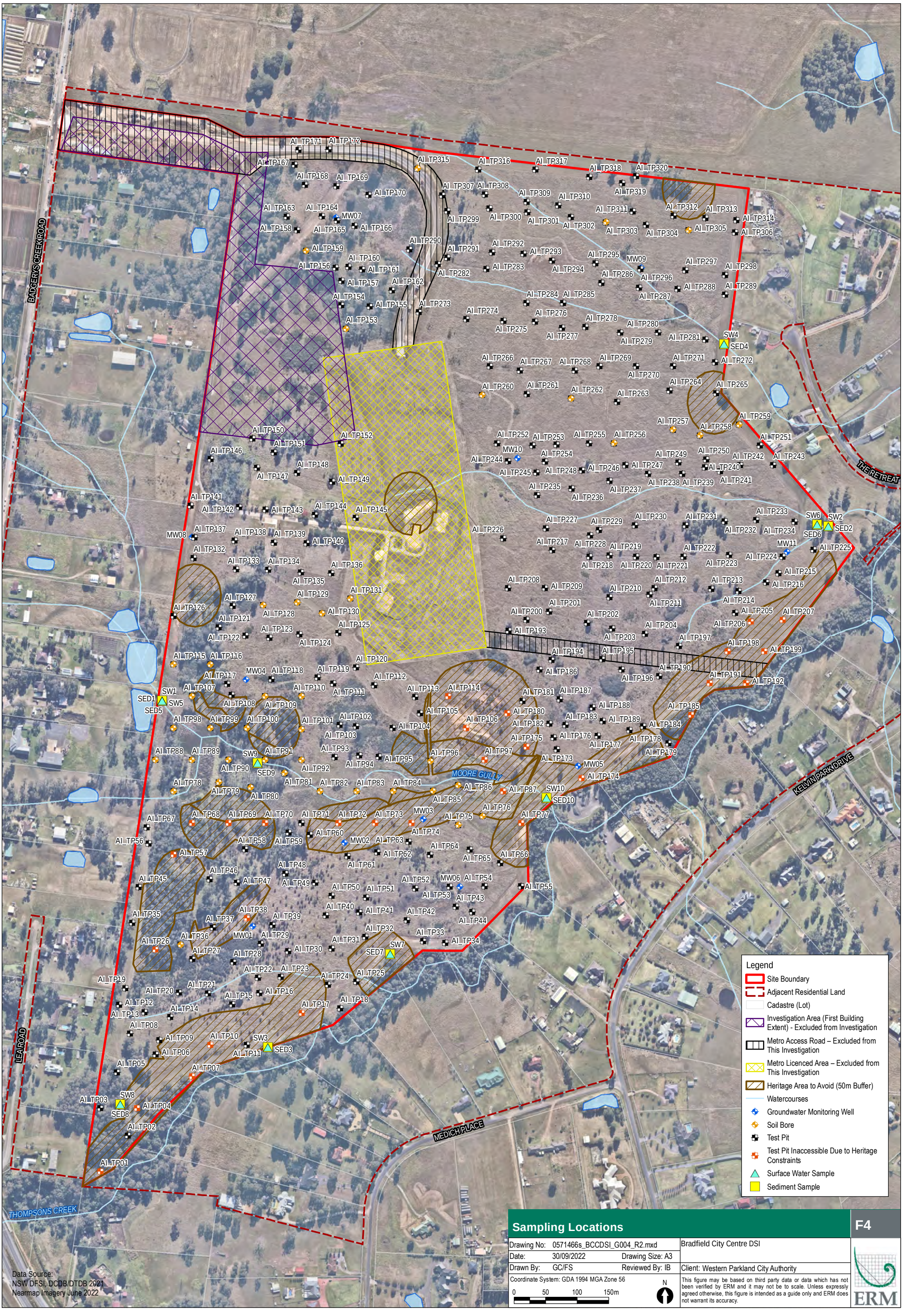
Drawing No: 0571466s_BCCDSI_G003_R1.mxd
Date: 30/09/2022 Drawing Size: A3
Drawn By: GC/FS Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 50 100 150m
N

Bradfield City Centre DSI

Client: Western Parkland City Authority

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM



Sampling Locations

F4

Drawing No: 0571466s_BCCDSI_G004_R2.mxd		Bradfield City Centre DSI
Date: 30/09/2022	Drawing Size: A3	
Drawn By: GC/FS	Reviewed By: IB	Client: Western Parkland City Authority

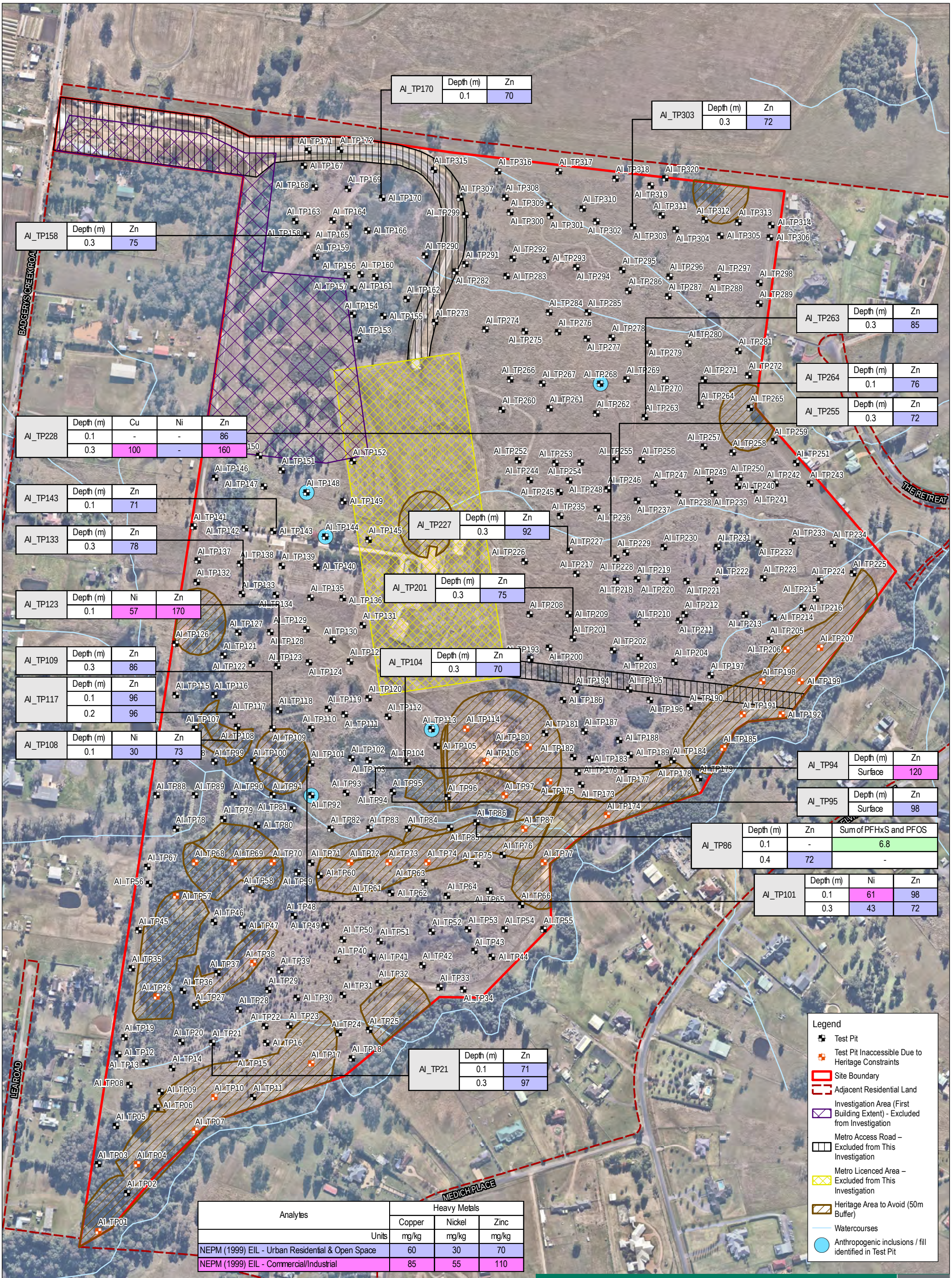
Coordinate System: GDA 1994 MGA Zone 56

0 50 100 150m

N

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM



AI_TP170	Depth (m)	Zn
	0.1	70

AI_TP303	Depth (m)	Zn
	0.3	72

AI_TP158	Depth (m)	Zn
	0.3	75

AI_TP263	Depth (m)	Zn
	0.3	85

AI_TP264	Depth (m)	Zn
	0.1	76

AI_TP255	Depth (m)	Zn
	0.3	72

AI_TP228	Depth (m)	Cu	Ni	Zn
	0.1	-	-	86
	0.3	100	-	160

AI_TP143	Depth (m)	Zn
	0.1	71

AI_TP133	Depth (m)	Zn
	0.3	78

AI_TP227	Depth (m)	Zn
	0.3	92

AI_TP201	Depth (m)	Zn
	0.3	75

AI_TP123	Depth (m)	Ni	Zn
	0.1	57	170

AI_TP104	Depth (m)	Zn
	0.3	70

AI_TP109	Depth (m)	Zn
	0.3	86

AI_TP117	Depth (m)	Zn
	0.1	96
	0.2	96

AI_TP108	Depth (m)	Ni	Zn
	0.1	30	73

AI_TP94	Depth (m)	Zn
	Surface	120

AI_TP95	Depth (m)	Zn
	Surface	98

AI_TP86	Depth (m)	Zn	Sum of PFHxS and PFOS
	0.1	-	6.8
	0.4	72	-

AI_TP101	Depth (m)	Ni	Zn
	0.1	61	98
	0.3	43	72

AI_TP21	Depth (m)	Zn
	0.1	71
	0.3	97

Analytes	Heavy Metals		
	Copper	Nickel	Zinc
Units	mg/kg	mg/kg	mg/kg
NEPM (1999) EIL - Urban Residential & Open Space	60	30	70
NEPM (1999) EIL - Commercial/Industrial	85	55	110

Analytes	PFAS
	Sum of PFHxS and PFOS
Units	µg/kg
PFAS NEMP 2020 Ecological direct exposure for wildlife diet (Avian Diet)	8.2
PFAS NEMP 2020 Ecological direct exposure for wildlife diet (Mammalian Diet)	4.6
PFAS NEMP 2020 Ecological exposure protective of birds	0.2

Data Source:
NSW DFSI, DCDB/DTDB 2021
Nearmap Imagery June 2022

Exceedances - Soil

F5

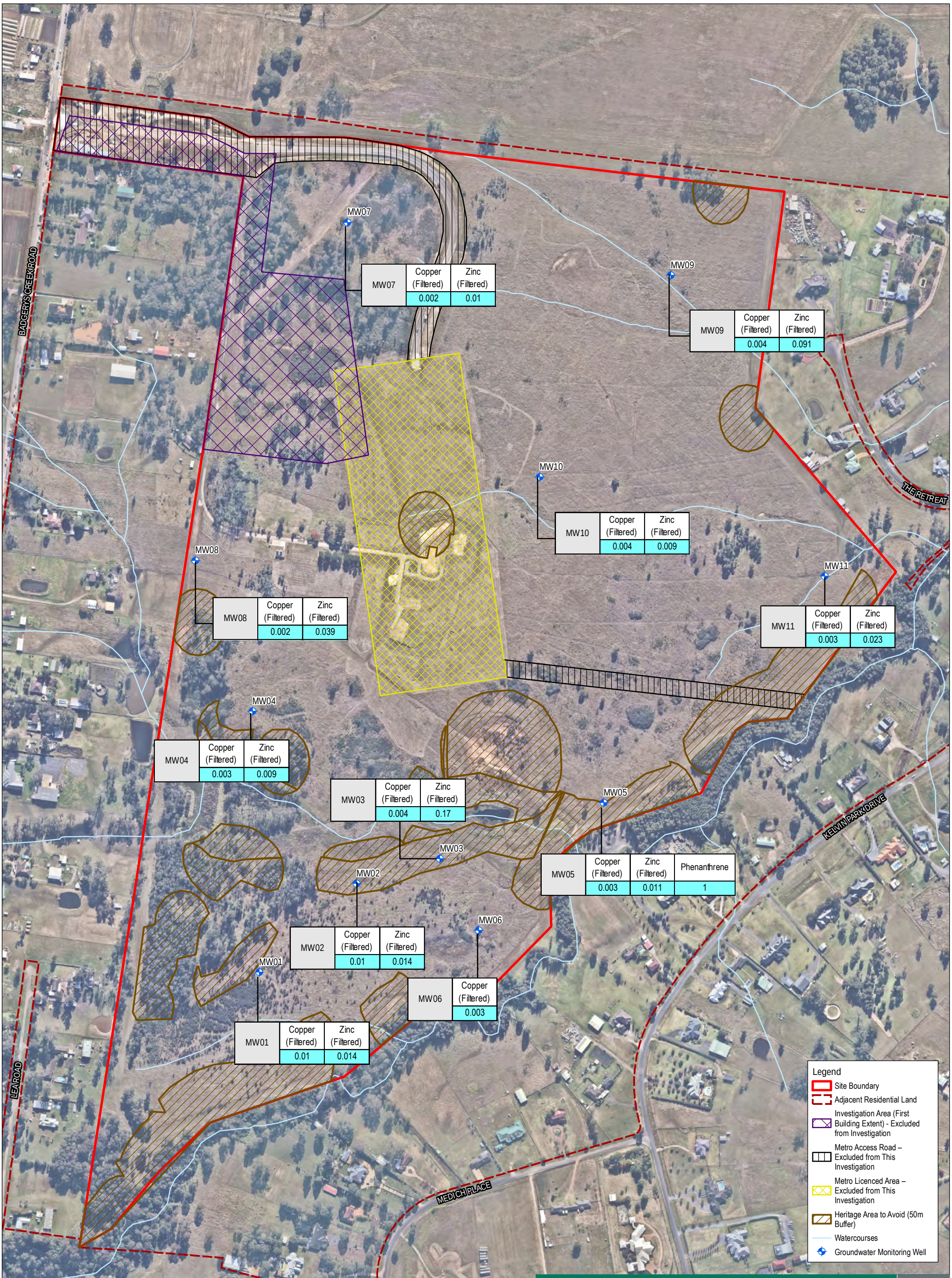
Drawing No: 0571466s_BCCDSI_G005_R1.mxd
Date: 30/09/2022 Drawing Size: A4
Drawn By: GC/FS Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 50 100 150m
N

Bradfield City Centre DSI

Client: Western Parkland City Authority

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM



MW07	Copper (Filtered)	Zinc (Filtered)
	0.002	0.01

MW09	Copper (Filtered)	Zinc (Filtered)
	0.004	0.091

MW10	Copper (Filtered)	Zinc (Filtered)
	0.004	0.009

MW08	Copper (Filtered)	Zinc (Filtered)
	0.002	0.039

MW11	Copper (Filtered)	Zinc (Filtered)
	0.003	0.023

MW04	Copper (Filtered)	Zinc (Filtered)
	0.003	0.009

MW03	Copper (Filtered)	Zinc (Filtered)
	0.004	0.17

MW05	Copper (Filtered)	Zinc (Filtered)	Phenanthrene
	0.003	0.011	1

MW02	Copper (Filtered)	Zinc (Filtered)
	0.01	0.014

MW06	Copper (Filtered)
	0.003

MW01	Copper (Filtered)	Zinc (Filtered)
	0.01	0.014

Analytes	Heavy Metals		PAH
	Copper (Filtered)	Zinc (Filtered)	Phenanthrene
Units	µg/L	µg/L	µg/L
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems	0.0014	0.008	0.6

Data Source:
NSW DFSI, DCDB/DTDB 2021
Nearmap Imagery June 2022

Exceedances - Groundwater

F6

Drawing No: 0571466s_BCCDSI_G006_R1.mxd
Date: 30/09/2022 Drawing Size: A4
Drawn By: GC/FS Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 50 100 150m
N

Bradfield City Centre DSI

Client: Western Parkland City Authority

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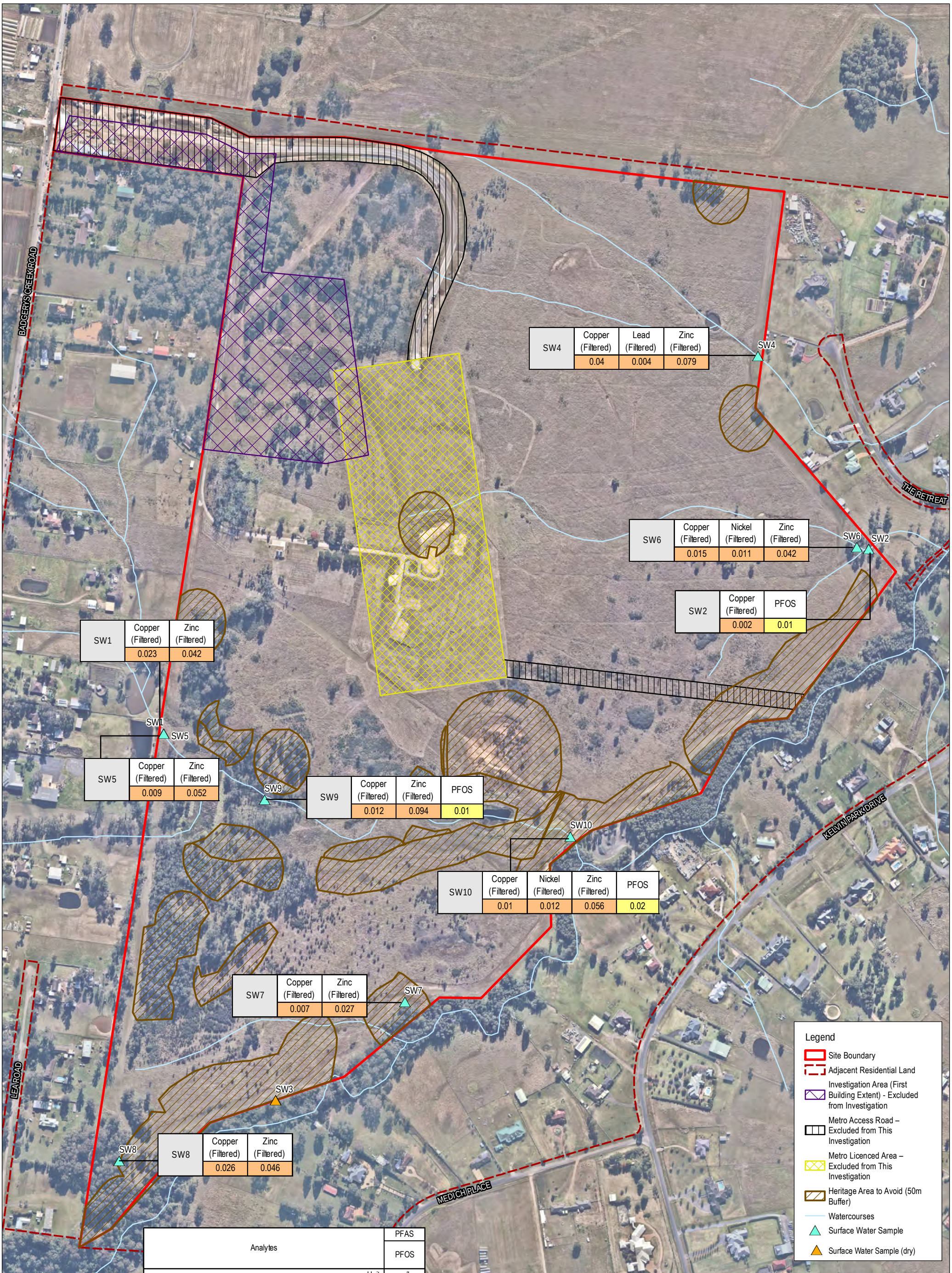
ERM



SW4	Copper (Filtered)	Lead (Filtered)	Zinc (Filtered)
	0.04	0.004	0.079

SW6	Copper (Filtered)	Nickel (Filtered)	Zinc (Filtered)
	0.015	0.011	0.042

SW2	Copper (Filtered)	PFOS
	0.002	0.01

SW1	Copper (Filtered)	Zinc (Filtered)
	0.023	0.042

SW5	Copper (Filtered)	Zinc (Filtered)
	0.009	0.052

SW9	Copper (Filtered)	Zinc (Filtered)	PFOS
	0.012	0.094	0.01

SW10	Copper (Filtered)	Nickel (Filtered)	Zinc (Filtered)	PFOS
	0.01	0.012	0.056	0.02

SW7	Copper (Filtered)	Zinc (Filtered)
	0.007	0.027

SW8	Copper (Filtered)	Zinc (Filtered)
	0.026	0.046

Analytes	PFAS
	PFOS
Units	µg/L
NEMP (2020) Freshwater - Default slightly to moderately disturbed systems	0.00023

Analytes	Heavy Metal			
	Copper (Filtered)	Lead (Filtered)	Nickel (Filtered)	Zinc (Filtered)
Units	mg/L	mg/L	mg/L	mg/L
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems	0.0014	0.0034	0.011	0.008

Exceedances - Surface Water

F7

Drawing No: 0571466s_BCCDSI_G007_R1.mxd
Date: 30/09/2022 Drawing Size: A4
Drawn By: GC/FS Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56

Bradfield City Centre DSI

Client: Western Parkland City Authority

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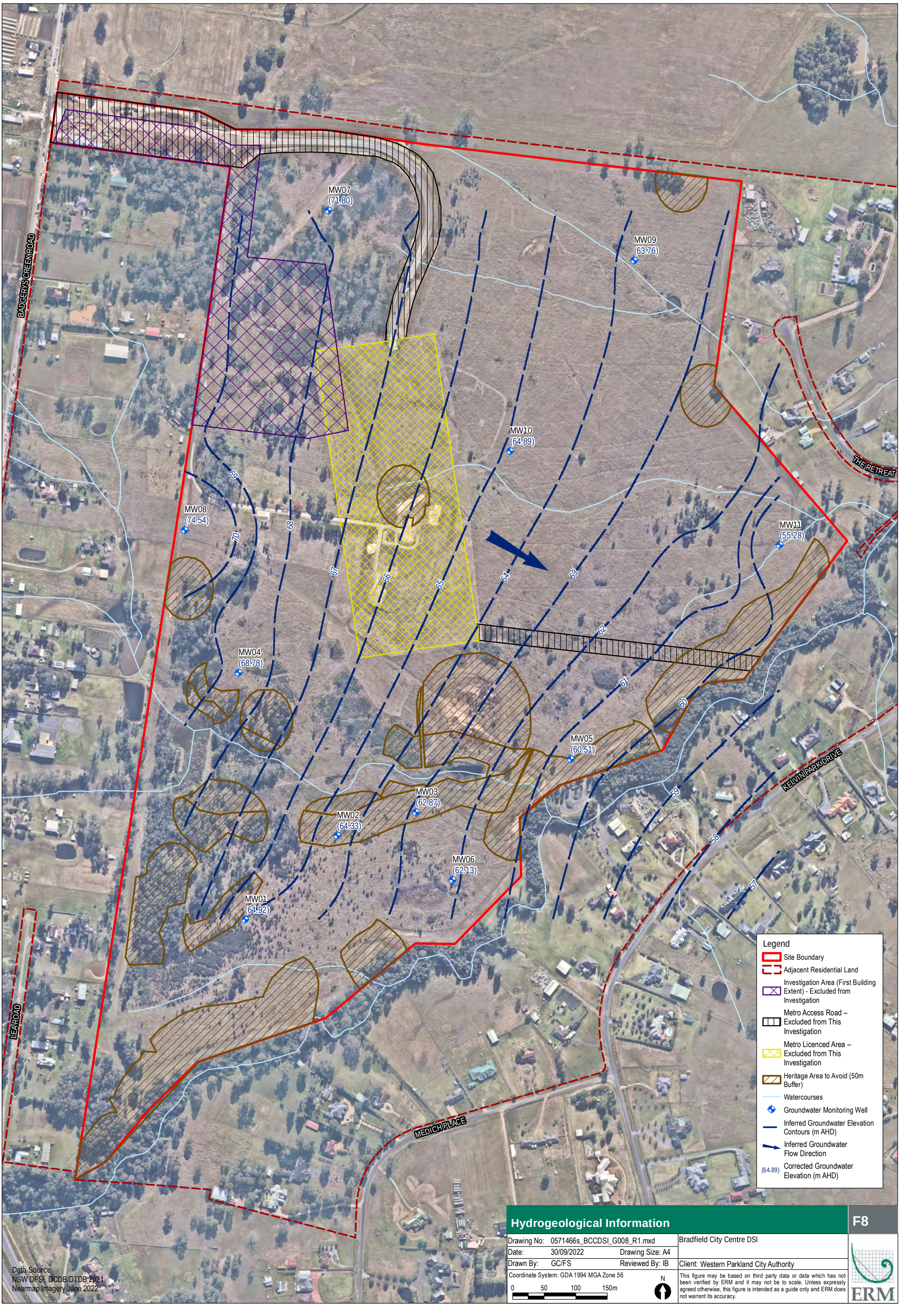
ERM

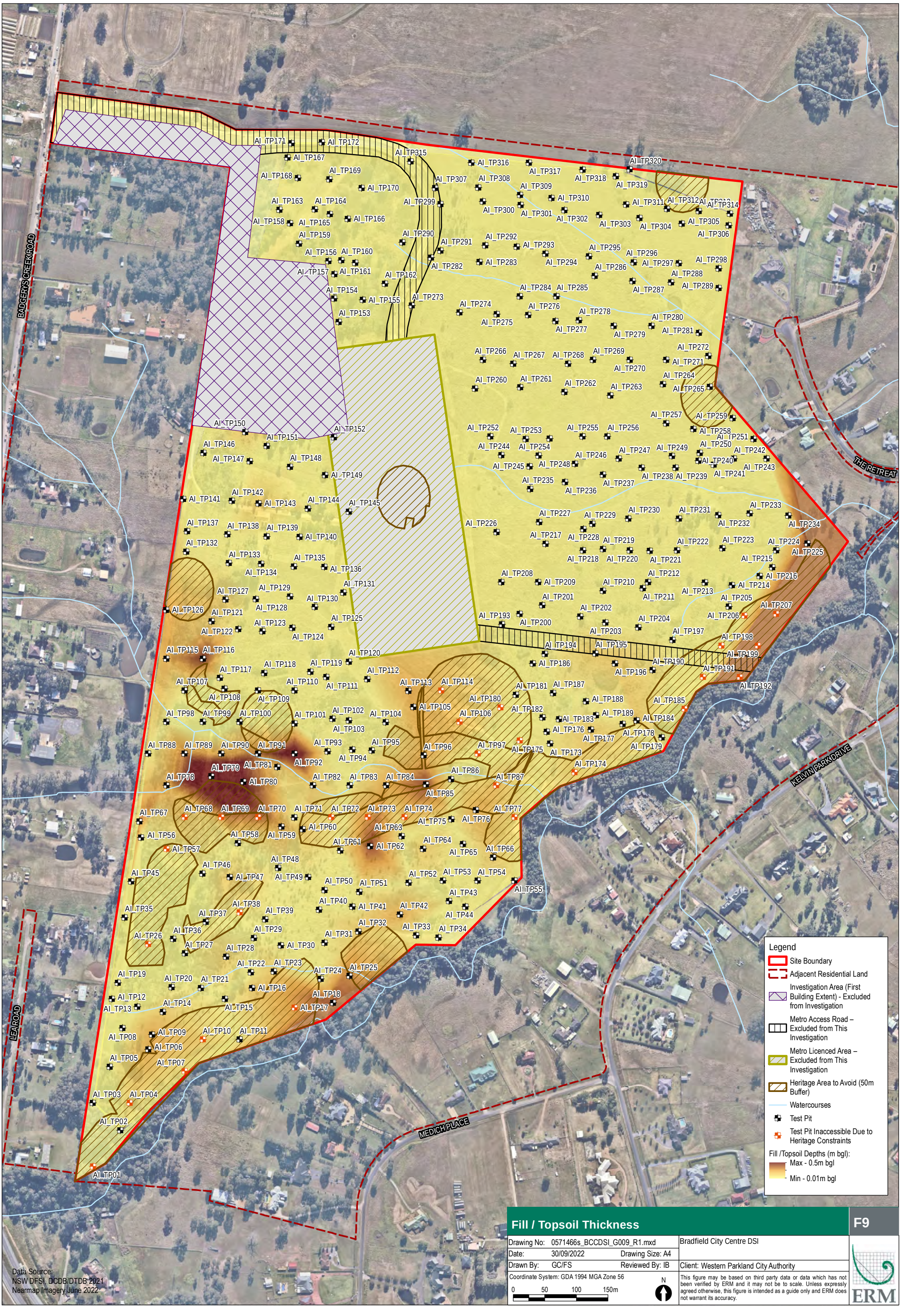


Hydrogeological Information

F8

Drawing No: 0571466s_BCCDSI_G008_R1.mxd		Bradfield City Centre DSI
Date: 30/09/2022	Drawing Size: A4	
Drawn By: GC/FS	Reviewed By: IB	Client: Western Parkland City Authority
Coordinate System: GDA 1994 MGA Zone 56		This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM

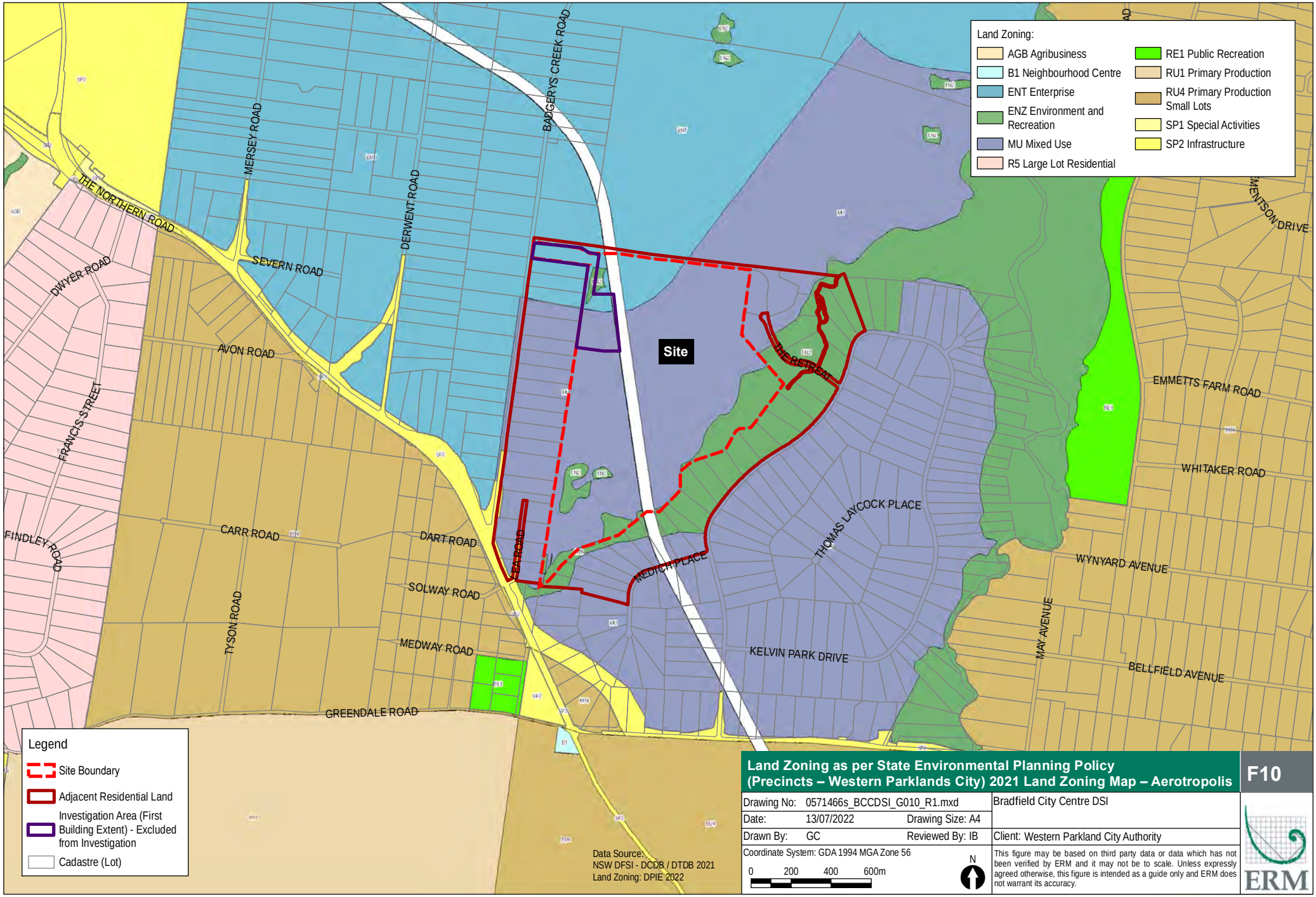


Fill / Topsoil Thickness

F9

Drawing No: 0571466s_BCCDSI_G009_R1.mxd		Bradfield City Centre DSI
Date: 30/09/2022	Drawing Size: A4	
Drawn By: GC/FS	Reviewed By: IB	Client: Western Parkland City Authority
Coordinate System: GDA 1994 MGA Zone 56		This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM



Land Zoning as per State Environmental Planning Policy (Precincts – Western Parklands City) 2021 Land Zoning Map – Aerotropolis

F10

Drawing No:	0571466s_BCCDSI_G010_R1.mxd		Bradfield City Centre DSI
Date:	13/07/2022	Drawing Size: A4	
Drawn By:	GC	Reviewed By: IB	Client: Western Parkland City Authority

Coordinate System: GDA 1994 MGA Zone 56

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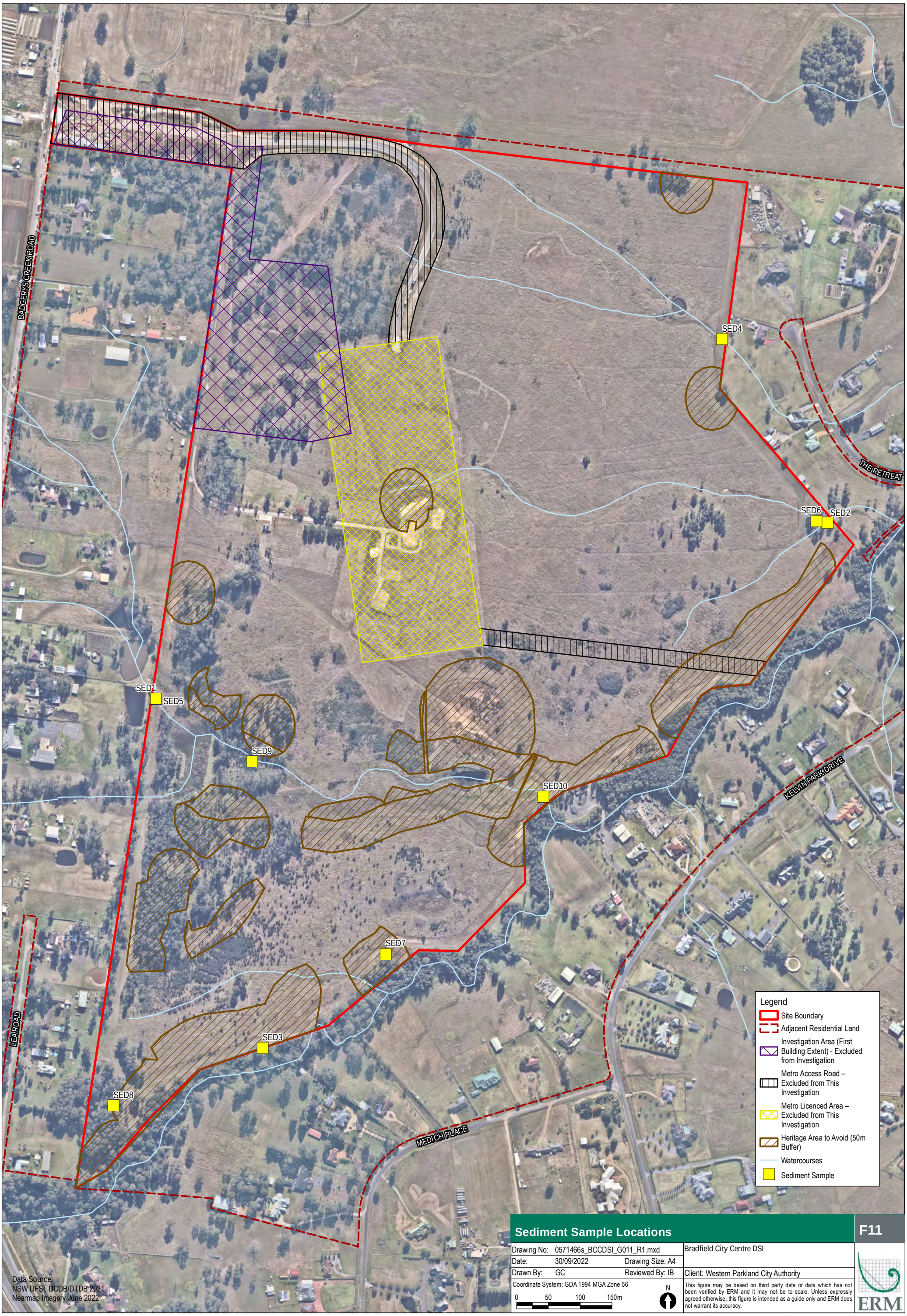
ERM


BADGERYS CREEK ROAD
THE RETREAT
KELVIN PARK DRIVE
MEDICI PLACE
LEA ROAD
SED1
SED2
SED3
SED4
SED5
SED6
SED7
SED8
SED9
SED10
Legend
Site Boundary
Adjacent Residential Land
Investigation Area (First Building Extent) - Excluded from Investigation
Metro Access Road – Excluded from This Investigation
Metro Licenced Area – Excluded from This Investigation
Heritage Area to Avoid (50m Buffer)
Watercourses
Sediment Sample
Data Source:
NSW DFSI, DCDB/DTDB 2021
Nearmap Imagery June 2022
Sediment Sample Locations
F11
Drawing No: 0571466s_BCCDSI_G011_R1.mxd
Date: 30/09/2022
Drawing Size: A4
Drawn By: GC
Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 50 100 150m
N
Bradfield City Centre DSI
Client: Western Parkland City Authority
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.
ERM

Appendix E Consultant's Summary Tables

					PFOS/PFOA																																					Inorganics
					10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-methylperfluorooctane sulfonamidoacetic acid	N-Methylperfluorooctanesulfonamidoethanol	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropanesulfonic acid (PFPrS)	Sum of PFAS	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	Perfluorodecanoic acid (PFDA)	Perfluorohexanoic acid (PFHxA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Perfluorooctanoic acid (PFOA)	Moisture Content (dried @ 103°C)
					µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	%
EQL					5	5	10	10	0.005	5	5	5	5	5	5	5	50	10	5	5	5	5	5	5	0.005	0.005	5	5	5	5	5	5	5	5	0.005	0.01	0.005	1
NEMP V2.0 Draft (2019) HGV - Industrial/commercial																			20000																		50		
NEMP V2.0 Draft (2019) HGV - Public open space																			1000																		10		
Field_ID	**LocCode**	**Sample_Depth_Range**	**Sampled_Date-Time**	**Lab_Report_Number**																																					
D02_20201210	SED-6		10/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	12
SED-1	SED-1		10/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	56
SED-10	SED-10		11/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	69
SED-2	SED-2		10/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	43
SED-3	SED-3		10/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	48
SED-4	SED-4		10/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	58
SED-5	SED-5		10/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	69
SED-6	SED-6		10/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	72
SED-7	SED-7		10/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	24
SED-8	SED-8		10/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	38
SED-9	SED-9		10/12/2020	763324	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	43
Statistical Summary																																									
Number of Results					11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Minimum Concentration					<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	12
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12
Maximum Concentration					<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<0.01	<0.005	72
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	72
Average Concentration					2.5	2.5	5	5	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	25	5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	0.005	0.0025	48
Median Concentration					2.5	2.5	5	5	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	25	5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	0.005	0.0025	48
Standard Deviation					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Number of Guideline Exceedances					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

						PFOS/PFOA																																	
				Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-methylperfluorooctane sulfonamidoacetic acid	N-Methylperfluorooctanesulfonamidoethanol	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropanesulfonic acid (PFPrS)	Sum of PFAS	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	Perfluorodecanoic acid (PFDA)	Perfluorohexanoic acid (PFHxA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Perfluorooctanoic acid (PFOA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L
EQL				0.01	0.01	0.01	0.01	0.05	0.05	0.05	0.05	0.01	0.01	0.00001	0.01	0.01	0.00001	0.1	0.05	0.01	0.01	0.01	0.05	0.05	0.05	0.01	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01	0.00001	0.00005	0.00001
NEMP V2.0 Draft (2019) GV - Drinking Water																				0.07							0.07			0.07								0.00056
NEMP V2.0 Draft (2019) GV - Freshwater (95%)																											0.13											0.22
NEMP V2.0 Draft (2019) GV - Freshwater (99%)																											0.00023											0.019
NEMP V2.0 Draft (2019) GV - Recreational Water																				0.7							0.7			0.7								0.0056
Field_ID	**LocCode**	**Sampled_Date-Time**	**Lab_Report_Number**																																				
BB01	BB01	11/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
BB02	BB02	11/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
BB03	BB03	11/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
BB114	BB114	11/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
BB116	BB116	11/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
D01_20201210	SW6	10/12/2020	763324	<0.03	<0.03	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	0.02	<0.00001	<0.1	0.05	<0.01	<0.01	0.03	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00003
D01_20201211	BB116	11/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
MW1-B	MW1	11/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
MW2	MW2	11/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
SW1	SW1	10/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	0.02	<0.00001	<0.1	<0.05	<0.01	<0.01	0.02	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
SW10	SW10	10/12/2020	763324	<0.03	<0.03	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	0.02	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00003
SW11	SW11	11/12/2020	763324	0.07	0.04	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	0.00001	0.12	0.11	0.07	<0.01	0.02	<0.05	<0.05	<0.05	0.02	0.04	<0.01	<0.01	0.03	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00003
SW2	SW2	10/12/2020	763324	0.12	0.11	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	0.24	<0.00001	2.21	2.19	0.03	0.02	1.7	<0.05	<0.05	<0.05	<0.01	0.02	<0.01	0.13	0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	0.00009
SW3	SW3	10/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
SW4	SW4	10/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	0.01	<0.00001	<0.1	0.06	<0.01	<0.01	0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
SW5	SW5	10/12/2020	763324	<0.03	<0.03	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	0.03	<0.00001	0.1	0.1	<0.01	<0.01	0.06	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00003
SW6	SW6	10/12/2020	763324	<0.03	<0.03	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	0.02	<0.00001	<0.1	0.05	<0.01	<0.01	0.03	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00003
SW7	SW7	10/12/2020	763324	<0.03	<0.03	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	0.02	<0.00001	<0.1	0.05	<0.01	<0.01	0.03	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00003
SW8	SW8	10/12/2020	763324	0.11	0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	0.15	0.15	0.11	<0.01	0.02	<0.05	<0.05	<0.05	<0.01	0.05	<0.01	0.02	0.06	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
SW9	SW9	10/12/2020	763324	<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
Statistical Summary																																							
Number of Results				20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	#NAME?	20	20	20	20	20	20	20	20	20	20	20
Number of Detects				3	3	0	0	0	0	0	0	0	0	0	0	7	1	4	8	3	1	10	0	0	0	1	#NAME?	0	3	3	0	0	0	0	0	0	0	1
Minimum Concentration				<0.02	<0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.00001	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	#NAME?	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	<0.00002
Minimum Detect				0.07	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	0.00001	0.1	0.05	0.03	0.02	0.02	ND	ND	ND	0.02	#NAME?	ND	0.01	0.01	ND	ND	ND	ND	ND	ND	ND	0.00009
Maximum Concentration				0.12	0.11	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.00001	<0.01	0.24	0.00001	2.21	2.19	0.11	0.02	1.7	<0.05	<0.05	<0.05	0.02	#NAME?	<0.01	0.13	0.06	<0.01	<0.05	<0.01	<0.01	<0.01	<0.00001	<0.00005	0.00009
Maximum Detect				0.12	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.24	0.00001	2.21	2.19	0.11	0.02	1.7	ND	ND	ND	0.02	#NAME?	ND	0.13	0.06	ND	ND	ND	ND	ND	ND	ND	0.00009
Average Concentration				0.025	0.02	0.005	0.005	0.025	0.025	0.025	0.025	0.005	0.005	0.000005	0.005	0.021	0.0000053	0.17	0.15	0.015	0.0058	0.1	0.025	0.025	0.025	0.0058	#NAME?	0.005	0.012	0.0093	0.005	0.025	0.005	0.005	0.005	0.000005	0.000025	0.000016
Median Concentration				0.01	0.01	0.005	0.005	0.025	0.025	0.025	0.025	0.005	0.005	0.000005	0.005	0.005	0.000005	0.05	0.025	0.005	0.005	0.0125	0.025	0.025	0.025	0.005	#NAME?	0.005	0.005	0.005	0.005	0.025	0.005	0.005	0.005	0.000005	0.000025	0.00001
Standard Deviation				0.034	0.024	0	0	0	0	0	0	0	0	0	0	0.052	0.0000011	0.48	0.48	0.027	0.0034	0.38	0	0	0	0.0034	#NAME?	0	0.028	0.013	0	0	0	0	0	0	0	0.000018
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	#NAME?	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	#NAME?	0	0	0	0	0	0	0	0	0	0	0

							PFOS/PFOA																						
					Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-methylperfluorooctane sulfonamidoacetic acid	N-Methylperfluorooctanesulfonamidoethanol	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropanesulfonic acid (PFPrS)	Sum of PFAS	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	Perfluorodecanoic acid (PFDA)	Perfluorohexanoic acid (PFHxA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorooctanesulfonic acid (PFOS)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL					0.01	0.01	0.01	0.01	0.05	0.05	0.05	0.05	0.01	0.01	0.00001	0.01	0.01	0.00001	0.1	0.05	0.01	0.01	0.01	0.05	0.05	0.05	0.01	0.00001
Field_ID	**LocCode**	**Sample_Depth_Range**	**Sampled_Date-Time**	**Lab_Report_Number**																									
SED-10	SED-10		10/12/2020	763324	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0	<0.01	<0.01	<0	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0
SED-11	SED-11		11/12/2020	763324	0.03	0.03	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0	<0.01	<0.01	<0	<0.1	<0.05	0.03	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	0
SED-2	SED-2		10/12/2020	763324	0.02	0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0	<0.01	0.01	<0	<0.1	0.06	0.02	<0.01	0.03	<0.05	<0.05	<0.05	<0.01	0
SED-4	SED-4		10/12/2020	763324	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0	<0.01	<0.01	<0	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0
SED-6	SED-6		10/12/2020	763324	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0	<0.01	<0.01	<0	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0
Statistical Summary																													
Number of Results					5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Number of Detects					2	2	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	1	0	0	0	0	2
Minimum Concentration					<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0	<0.01	<0.01	<0	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0
Minimum Detect					0.02	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	ND	ND	0.06	0.02	ND	0.03	ND	ND	ND	ND	ND
Maximum Concentration					0.03	0.03	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	0	<0.01	0.01	0	<0.1	0.06	0.03	<0.01	0.03	<0.05	<0.05	<0.05	<0.01	0
Maximum Detect					0.03	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	ND	ND	0.06	0.03	ND	0.03	ND	ND	ND	ND	ND
Average Concentration					0.013	0.013	0.005	0.005	0.025	0.025	0.025	0.025	0.005	0.005	0	0.005	0.006	0	0.05	0.032	0.013	0.005	0.01	0.025	0.025	0.025	0.005	0
Median Concentration					0.005	0.005	0.005	0.005	0.025	0.025	0.025	0.025	0.005	0.005	0	0.005	0.005	0	0.05	0.025	0.005	0.005	0.005	0.025	0.025	0.025	0.005	0
Standard Deviation					0.012	0.012	0	0	0	0	0	0	0	0	0	0	0.0022	0	0	0.016	0.012	0	0.011	0	0	0	0	0
Number of Guideline Exceedances					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

															Inorganics
					Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Perfluorooctanoic acid (PFOA)	Leachate Fluid
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	COMMENT
EQL					0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01	0.00001	0.00005	0.00001	
Field_ID	**LocCode**	**Sample_Depth_Range**	**Sampled_Date-Time**	**Lab_Report_Number**												
SED-10	SED-10		10/12/2020	763324	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0	<0	<0	1
SED-11	SED-11		11/12/2020	763324	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0	<0	<0	4
SED-2	SED-2		10/12/2020	763324	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0	<0	<0	1
SED-4	SED-4		10/12/2020	763324	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0	<0	<0	1
SED-6	SED-6		10/12/2020	763324	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0	<0	<0	1
Statistical Summary																
Number of Results					5	5	5	5	5	5	5	5	5	5	5	5
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	5
Minimum Concentration					<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0	<0	<0	1
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Maximum Concentration					<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	0	0	0	4
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4
Average Concentration					0.005	0.005	0.005	0.005	0.025	0.005	0.005	0.005	0	0	0	1.6
Median Concentration					0.005	0.005	0.005	0.005	0.025	0.005	0.005	0.005	0	0	0	1
Standard Deviation					0	0	0	0	0	0	0	0	0	0	0	1.3
Number of Guideline Exceedances					0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0

Field Blanks (WATER)
Filter: Lab_Report_Number in('763324')

			Lab Report Number	763324	763324	763324	763325	763326
			Field ID	R01_20201209	TB01	TB02	TB03	TB04
			Sampled_Date/Time	9/12/2020	11/12/2020	11/12/2020	12/12/2020	13/12/2020
			Sample Type	Rinsate	Trip_B	Trip_B	TS	TS
Chem_Group	**ChemName**	**Units**	**EQL**					
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.01	<0.02	<0.02	<0.02		
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	<0.02	<0.02	<0.02		
PFOS/PFOA	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.01	<0.01	<0.01	<0.01	134	
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01	<0.01	<0.01	<0.01	125	
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/L	0.05	<0.05	<0.05	<0.05	124	
	N-methylperfluorooctane sulfonamidoacetic acid	µg/L	0.05	<0.05	<0.05	<0.05	129	
	N-Methylperfluorooctanesulfonamidoethanol	µg/L	0.05	<0.05	<0.05	<0.05	144	
	Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.05	<0.05	<0.05	121	
	Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01	<0.01	<0.01	<0.01	132	
	Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.01	<0.01	<0.01	99	
	Perfluorononanesulfonic acid (PFNS)	mg/l	0.00001	<0.00001	<0.00001	<0.00001	102	
	Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	<0.01	<0.01	<0.01	135	
	Perfluoropentanoic acid (PFPeA)	µg/L	0.01	<0.01	<0.01	<0.01	135	
	Perfluoropropanesulfonic acid (PFPrS)	mg/l	0.00001	<0.00001	<0.00001	<0.00001	112	
	Sum of PFAS	µg/L	0.1	<0.1	<0.1	<0.1		
	Sum of PFAS (WA DER List)	µg/L	0.05	<0.05	<0.05	<0.05		
	Sum of PFHxS and PFOS	µg/L	0.01	<0.01	<0.01	<0.01		
	Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.01	<0.01	<0.01	141	
	Perfluorohexanoic acid (PFHxA)	µg/L	0.01	<0.01	<0.01	<0.01	141	
	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/L	0.05	<0.05	<0.05	<0.05	123	
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/L	0.05	<0.05	<0.05	<0.05	122	
	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	µg/L	0.05	<0.05	<0.05	<0.05	105	
	Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	<0.01	<0.01	<0.01	124	
	Perfluorooctanesulfonic acid (PFOS)	mg/l	0.00001	<0.00001	<0.00001	<0.00001	133	
	Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.01	<0.01	<0.01	144	
	Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.01	<0.01	<0.01	124	
	Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	<0.01	<0.01	<0.01	132	
	Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.01	<0.01	<0.01	126	
	Perfluorooctane sulfonamide (PFOSA)	µg/L	0.05	<0.05	<0.05	<0.05	131	
	Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.01	<0.01	<0.01	127	
	Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.01	<0.01	<0.01	135	
	Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.01	<0.01	<0.01	133	
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/l	0.00001	<0.00001	<0.00001	<0.00001	139	
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/l	0.00005	<0.00005	<0.00005	<0.00005	139	
	Perfluorooctanoic acid (PFOA)	mg/l	0.00001	<0.00002	<0.00002	<0.00002	125	

			Organic													PAH																				TPH								Volatile					
			>C10 - C40 Fraction (sum) (SG)	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	TRH C10-C36 (Total) (after silica gel clean-up)	C10-C14	C15-C28	C29-C36	C10-C36	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			100	50	100	100	20	20	20	50	50	100	100	100	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	50	100	100	100	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m									50		280				5														5															0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m									90		NL				NL														NL															1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m									310		NL				NL														NL															4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m									480		NL				NL														NL															6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)								800		1000		5000	10000																																				
NEPM (1999) Management Limits - Urban residential & open space (fine)								800		1000		3500	10000																																				
NEPM (1999) HIL A - Residential (garden)																																		3	300														
NEPM (1999) HSL A Residential - Asbestos																																																	
NEPM (1999) HIL C - Recreation																																		3	300														
NEPM (1999) HSL C Recreation - Asbestos																																																	
NEPM (1999) HIL D - Commercial/Industrial																																		40	4000														
NEPM (1999) HSL D Comm/Indust - Asbestos																																																	
NEPM (1999) EIL - Urban Residential & Open Space															170														170																				
NEPM (1999) ESL - Urban Residential & Open Space (fine)												1300	5600							0.7																								65	105	125			45
NEPM (1999) EIL - Commercial/Industrial															370														370																				
NEPM (1999) ESL - Commercial/Industrial (fine)												2500	6600							0.7																								95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																	
Field_ID	**LocCode**	**Sampled_Date-Time**																																															
A1_TP128_0.1	A1_TP128	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP128_0.3	A1_TP128	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP129_0.1	A1_TP129	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP129_0.3	A1_TP129	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP130_0.1	A1_TP130	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP130_0.3	A1_TP130	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP131_0.1	A1_TP131	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP131_0.3	A1_TP131	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP153_0.1	A1_TP153	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	55	55	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP153_0.3	A1_TP153	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP159_0.3	A1_TP159	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP256_0.1	A1_TP256	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP256_0.3	A1_TP256	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP257_0.1	A1_TP257	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP257_0.3	A1_TP257	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP258_0.1	A1_TP258	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP258_0.3	A1_TP258	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP259_0.1	A1_TP259	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	55	68	123	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP259_0.3	A1_TP259	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP260_0.1	A1_TP260	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP260_0.3	A1_TP260	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP262_0.1	A1_TP262	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP262_0.3	A1_TP262	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP303_0.1	A1_TP303	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP303_0.3	A1_TP303	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP305_0.1	A1_TP305	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP305_0.3	A1_TP305	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP315_0.1	A1_TP315	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP315_0.3	A1_TP315	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP36_0.1	A1_TP36	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP36_0.3	A1_TP36	16/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP02-0.1	AI_TP02	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP02-0.3	AI_TP02	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP03-0.1	AI_TP03	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP03-0.3	AI_TP03	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP05_0.1	AI_TP05	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP05_0.3	AI_TP05	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP06_0.3	AI_TP06	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP06_0.1	AI_TP06	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP08_0.1	AI_TP08	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP08_0.3	AI_TP08	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP09_0.1	AI_TP09	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP09_0.4	AI_TP09	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP100_0.1	AI_TP100	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	55	55	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP100_0.3	AI_TP100	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP101_0.1	AI_TP101	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	130	<100	130	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	61	100	161	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP101_0.3	AI_TP101	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP102_0.3	AI_TP102	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP102_0.1	AI_TP102	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	52	52	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP103_0.3	AI_TP103	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP103_0.1	AI_TP103	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	76	76	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP104_0.3	AI_TP104	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP104_0.1	AI_TP104	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP105_0.1	AI_TP105	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP105_0.4	AI_TP105	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP107_0.1	AI_TP107	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	110	<100	110	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	51	81	132	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP107_0.3	AI_TP107	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

			Organic													PAH																				TPH								Volatile					
			>C10 - C40 Fraction (sum) (SG)	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	TRH C10-C36 (Total) (after silica gel clean-up)	C10-C14	C15-C28	C29-C36	C10-C36	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			100	50	100	100	20	20	20	50	50	100	100	100	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	50	100	100	100	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m									50		280				5														5															0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m									90		NL				NL														NL															1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m									310		NL				NL														NL															4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m									480		NL				NL														NL															6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)								800		1000		5000	10000																																				
NEPM (1999) Management Limits - Urban residential & open space (fine)								800		1000		3500	10000																																				
NEPM (1999) HIL A - Residential (garden)																																		3	300														
NEPM (1999) HSL A Residential - Asbestos																																																	
NEPM (1999) HIL C - Recreation																																		3	300														
NEPM (1999) HSL C Recreation - Asbestos																																																	
NEPM (1999) HIL D - Commercial/Industrial																																		40	4000														
NEPM (1999) HSL D Comm/Indust - Asbestos																																																	
NEPM (1999) EIL - Urban Residential & Open Space															170														170																				
NEPM (1999) ESL - Urban Residential & Open Space (fine)												1300	5600							0.7																								65	105	125			45
NEPM (1999) EIL - Commercial/Industrial															370														370																				
NEPM (1999) ESL - Commercial/Industrial (fine)												2500	6600							0.7																								95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																	
Field_ID	**LocCode**	**Sampled_Date-Time**																																															
AI_TP108_0.1	AI_TP108	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP108_0.5	AI_TP108	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP109_0.1	AI_TP109	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP109_0.3	AI_TP109	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP11-0.1	AI_TP11	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP110_0.1	AI_TP110	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	58	58	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP110_0.3	AI_TP110	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP111_0.3	AI_TP111	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP111_0.1	AI_TP111	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	55	55	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP112_0.3	AI_TP112	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP112_0.1	AI_TP112	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	52	52	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP113_0.3	AI_TP113	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP113_0.1	AI_TP113	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP115_0.1	AI_TP115	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP115_0.3	AI_TP115	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP116_0.1	AI_TP116	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP117_0.1	AI_TP117	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	64	64	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP117_0.2	AI_TP117	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP118_0.1	AI_TP118	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	51	51	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP118_0.2	AI_TP118	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP119_0.3	AI_TP119	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP119_0.1	AI_TP119	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	110	<100	110	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	72	72	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP12_0.1	AI_TP12	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP12_0.3	AI_TP12	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP120_0.3	AI_TP120	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP120_0.1	AI_TP120	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	62	62	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP121_0.3	AI_TP121	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP121_0.1	AI_TP121	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP122_0.3	AI_TP122	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP122_0.1	AI_TP122	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	54	54	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP123_0.3	AI_TP123	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP123_0.1	AI_TP123	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	62	62	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP124_0.3	AI_TP124	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP124_0.1	AI_TP124	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	61	61	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP125_0.3	AI_TP125	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP125_0.1	AI_TP125	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	130	<100	130	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	68	90	158	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP126_0.3	AI_TP126	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP126_0.1	AI_TP126	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP127_0.3	AI_TP127	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	51	<50	51	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP127_0.1	AI_TP127	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	100	<100	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	66	51	117	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP13_0.1	AI_TP13	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP13_0.3	AI_TP13	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP132_0.1	AI_TP132	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP132_0.3	AI_TP132	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	54	55	109	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP133_0.1	AI_TP133	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP133_0.3	AI_TP133	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	61	61	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP134_0.1	AI_TP134	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP134_0.3	AI_TP134	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP135_0.1	AI_TP135	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	55	52	107	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP135_0.3	AI_TP135	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP136_0.1	AI_TP136	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP136_0.3	AI_TP136	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP137_0.1	AI_TP137	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP137_0.3	AI_TP137	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP138_0.1	AI_TP138	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP138_0.3	AI_TP138	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP139_0.1	AI_TP139	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

Organic

Field_ID	LocCode	Sampled_Date-Time	>C10 - C40 Fraction (sum) (SG)	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			100	50	100	100	20	20	20	50	50	100	100	100	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m									50		280				5
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m									90		NL				NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m									NL		NL				NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m									NL		NL				NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m									310		NL				NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m									480		NL				NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)								800		1000		5000	10000		
NEPM (1999) Management Limits - Urban residential & open space (fine)								800		1000		3500	10000		
NEPM (1999) HIL A - Residential (garden)															
NEPM (1999) HSL A Residential - Asbestos															
NEPM (1999) HIL C - Recreation															
NEPM (1999) HSL C Recreation - Asbestos															
NEPM (1999) HIL D - Commercial/Industrial															
NEPM (1999) HSL D Comm/Indust - Asbestos															
NEPM (1999) EIL - Urban Residential & Open Space															170
NEPM (1999) ESL - Urban Residential & Open Space (fine)												1300	5600		
NEPM (1999) EIL - Commercial/Industrial															370
NEPM (1999) ESL - Commercial/Industrial (fine)												2500	6600		
NEPM (1999) HSL B Residential - Asbestos															
AI_TP139_0.3	AI_TP139	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP14_0.1	AI_TP14	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP14_0.4	AI_TP14	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP140_0.1	AI_TP140	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP140_0.3	AI_TP140	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP141_0.1	AI_TP141	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP141_0.3	AI_TP141	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP142_0.3	AI_TP142	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP142_0.1	AI_TP142	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP143_0.3	AI_TP143	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP143_0.1	AI_TP143	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	110	<100	110	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP144_0.1	AI_TP144	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	100	<100	100	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP145_0.3	AI_TP145	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP145_0.1	AI_TP145	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP146_0.3	AI_TP146	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP146_0.1	AI_TP146	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP147_0.3	AI_TP147	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP147_0.1	AI_TP147	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP148_0.3	AI_TP148	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP148_0.1	AI_TP148	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP149_0.3	AI_TP149	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP149_0.1	AI_TP149	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP15-0.1	AI_TP15	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP15-0.3	AI_TP15	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP150_0.1	AI_TP150	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP150_0.3	AI_TP150	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP151_0.1	AI_TP151	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP151_0.3	AI_TP151	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP152_0.1	AI_TP152	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP152_0.3	AI_TP152	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP158_0.1	AI_TP158	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP158_0.3	AI_TP158	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP16_0.1	AI_TP16	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP16_0.3	AI_TP16	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP160_0.3	AI_TP160	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP163_0.1	AI_TP163	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP163_0.3	AI_TP163	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP164_0.1	AI_TP164	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP164_0.4	AI_TP164	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP165_0.1	AI_TP165	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP165_0.3	AI_TP165	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP166_0.1	AI_TP166	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP166_0.3	AI_TP166	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP167_0.1	AI_TP167	27/10/2021	<100	<50	<100	<100	-	-	-	-	-	-	-	-	-
AI_TP167_0.1	AI_TP167	27/10/2021	-	-	-	-	<20	<20	<20	66	66	710	410	1186	<0.5
AI_TP167_0.3	AI_TP167	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP168_0.1	AI_TP168	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP168_0.3	AI_TP168	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP169_0.1	AI_TP169	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP169_0.3	AI_TP169	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP170_0.1	AI_TP170	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP170_0.3	AI_TP170	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP171_0.1	AI_TP171	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP171_0.3	AI_TP171	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP172_0.1	AI_TP172	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5

PAH

Field_ID	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m														5						
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m														NL						
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m														NL						
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m														NL						
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m														NL						
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m														NL						
NEPM (1999) Management Limits - Commercial/Industrial (fine)																				
NEPM (1999) Management Limits - Urban residential & open space (fine)																				
NEPM (1999) HIL A - Residential (garden)																			3	300
NEPM (1999) HSL A Residential - Asbestos																				
NEPM (1999) HIL C - Recreation																			3	300
NEPM (1999) HSL C Recreation - Asbestos																				
NEPM (1999) HIL D - Commercial/Industrial																			40	4000
NEPM (1999) HSL D Comm/Indust - Asbestos																				
NEPM (1999) EIL - Urban Residential & Open Space														170						
NEPM (1999) ESL - Urban Residential & Open Space (fine)					0.7															
NEPM (1999) EIL - Commercial/Industrial														370						
NEPM (1999) ESL - Commercial/Industrial (fine)					0.7															
NEPM (1999) HSL B Residential - Asbestos																				
AI_TP139_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP14_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP14_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP140_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP140_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP141_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP141_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP142_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP142_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP143_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP143_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP144_0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP144_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP144_0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP145_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP145_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP146_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP146_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP147_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP147_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP148_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP148_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP149_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP149_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP15-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP15-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP150_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP150_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP151_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP151_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP152_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP152_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP158_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP158_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP16_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP16_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP160_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP163_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP163_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP164_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP164_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP165_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP165_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP166_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP166_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP167_0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AI_TP167_0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.2	2.4	<1	<1
AI_TP167_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP168_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP168_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP169_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP169_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP170_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP170_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP171_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP171_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP172_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5

TPH / Volatile

Field_ID	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	TRH C10-C36 (Total) (after silica gel clean-up)	C10-C14	C15-C28	C29-C36	C10-C36	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	50	100	100	100	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m									0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m									1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m									NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m									NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m									4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m									6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)														
NEPM (1999) Management Limits - Urban residential & open space (fine)														
NEPM (1999) HIL A - Residential (garden)														
NEPM (1999) HSL A Residential - Asbestos														
NEPM (1999) HIL C - Recreation														
NEPM (1999) HSL C Recreation - Asbestos														
NEPM (1999) HIL D - Commercial/Industrial														
NEPM (1999) HSL D Comm/Indust - Asbestos														
NEPM (1999) EIL - Urban Residential & Open Space														
NEPM (1999) ESL - Urban Residential & Open Space (fine)									65	105	125			45
NEPM (1999) EIL - Commercial/Industrial														
NEPM (1999) ESL - Commercial/Industrial (fine)									95	135	185			95
NEPM (1999) HSL B Residential - Asbestos														
AI_TP139_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP14_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP14_0.4	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP140_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP140_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP141_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP141_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP142_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP142_0.1	-	-	-	-	<20	50	71	121	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP143_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP143_0.1	-	-	-	-	<20	62	86	148	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP144_0.2	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP144_0.1	-	-	-	-	26	72	50	148	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP144_0.2	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP145_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP145_0.1	-	-	-	-	<20	<50	58	58	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP146_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP146_0.1	-	-	-	-	<20	<50	70	70	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP147_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP147_0.1	-	-	-	-	<20	<50	61	61	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP148_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP148_0.1	-	-	-	-	<20	<50	56	56	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP149_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP149_0.1	-	-	-	-	<20	<50	50	50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP15-0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP15-0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP150_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP150_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP151_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP151_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP152_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP152_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP158_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP158_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP16_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP16_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP160_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP163_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP163_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP164_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP164_0.4	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP165_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP165_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP166_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP166_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP167_0.1	<50	<100	<100	<100	-	-	-	-	-	-	-	-	-	-
AI_TP167_0.1	-	-	-	-	39	300	550	889	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP167_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP168_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP168_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP169_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP169_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP170_0.1	-	-	-	-	<20	<50	52	52	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP170_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP171_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP171_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP172_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

			Organic													PAH																				TPH								Volatile					
			>C10 - C40 Fraction (sum) (SG)	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	TRH C10-C36 (Total) (after silica gel clean-up)	C10-C14	C15-C28	C29-C36	C10-C36	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			100	50	100	100	20	20	20	50	50	100	100	100	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	50	100	100	100	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m									50		280				5														5															0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m									90		NL				NL														NL															1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m									310		NL				NL														NL															4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m									480		NL				NL														NL															6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)								800		1000		5000	10000																																				
NEPM (1999) Management Limits - Urban residential & open space (fine)								800		1000		3500	10000																																				
NEPM (1999) HIL A - Residential (garden)																																		3	300														
NEPM (1999) HSL A Residential - Asbestos																																																	
NEPM (1999) HIL C - Recreation																																		3	300														
NEPM (1999) HSL C Recreation - Asbestos																																																	
NEPM (1999) HIL D - Commercial/Industrial																																		40	4000														
NEPM (1999) HSL D Comm/Indust - Asbestos																																																	
NEPM (1999) EIL - Urban Residential & Open Space															170														170																				
NEPM (1999) ESL - Urban Residential & Open Space (fine)												1300	5600							0.7																								65	105	125			45
NEPM (1999) EIL - Commercial/Industrial															370														370																				
NEPM (1999) ESL - Commercial/Industrial (fine)												2500	6600							0.7																								95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																	
Field_ID	**LocCode**	**Sampled_Date-Time**																																															
AI_TP172_0.3	AI_TP172	27/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP173_0.1	AI_TP173	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP173_0.4	AI_TP173	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP176_0.1	AI_TP176	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP176_0.3	AI_TP176	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP177_0.1	AI_TP177	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP177_0.4	AI_TP177	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP178_0.1	AI_TP178	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP178_0.4	AI_TP178	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP179_0.1	AI_TP179	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP179_0.4	AI_TP179	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP18_0.2	AI_TP18	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP181_0.1	AI_TP181	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP181_0.3	AI_TP181	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP182_0.1	AI_TP182	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP182_0.3	AI_TP182	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP183_0.1	AI_TP183	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP183_0.3	AI_TP183	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP184_0.1	AI_TP184	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP184_0.4	AI_TP184	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP186_0.1	AI_TP186	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	-	-	-	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	0.6	-	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP186_0.3	AI_TP186	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	1.2	-	<0.5	-	-	-	-	<20	<50	<50	<50	-	-	<0.1	<0.2	<0.1	-
AI_TP187_0.1	AI_TP187	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP187_0.3	AI_TP187	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	-	<0.5	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	-	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	-	<0.1	-	<0.1	-
AI_TP188_0.1	AI_TP188	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	-	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	-	<0.1	<0.2	<0.1	-
AI_TP188_0.3	AI_TP188	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	-	<0.1	<0.2	-	-
AI_TP189_0.1	AI_TP189	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP189_0.3	AI_TP189	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP19_0.1	AI_TP19	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP19_0.3	AI_TP19	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP193_0.1	AI_TP193	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	210	<100	210	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	120	120	240	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP193_0.3	AI_TP193	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP194_0.1	AI_TP194	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	120	<100	120	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	63	76	139	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP194_0.3	AI_TP194	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP195_0.1	AI_TP195	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP195_0.3	AI_TP195	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP196_0.1	AI_TP196	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP196_0.3	AI_TP196	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP197_0.1	AI_TP197	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP197_0.4	AI_TP197	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP20_0.1	AI_TP20	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP20_0.4	AI_TP20	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP200_0.1	AI_TP200	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	140	<100	140	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	83	76	159	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP200_0.3	AI_TP200	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP201_0.1	AI_TP201	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP201_0.3	AI_TP201	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP202_0.1	AI_TP202	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP202_0.3	AI_TP202	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP203_0.1	AI_TP203	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP203_0.3	AI_TP203	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP204_0.1	AI_TP204	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP204_0.3	AI_TP204	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP205_0.1	AI_TP205	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	-	-	<20	<50	<50	<50	-	-	<0.1	<0.2	<0.1	-
AI_TP205_0.3	AI_TP205	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	-	<0.5	-	-	-	-	<20	<50	<50	<50	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP208_0.1	AI_TP208	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP208_0.3	AI_TP208	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP209_0.1	AI_TP209	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

ERM

Organic

Field_ID	LocCode	Sampled_Date-Time	>C10 - C40 Fraction (sum) (SG)	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			100	50	100	100	20	20	20	50	50	100	100	100	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m									50		280				5
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m									90		NL				NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m									NL		NL				NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m									NL		NL				NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m									310		NL				NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m									480		NL				NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)								800		1000		5000	10000		
NEPM (1999) Management Limits - Urban residential & open space (fine)								800		1000		3500	10000		
NEPM (1999) HIL A - Residential (garden)															
NEPM (1999) HSL A Residential - Asbestos															
NEPM (1999) HIL C - Recreation															
NEPM (1999) HSL C Recreation - Asbestos															
NEPM (1999) HIL D - Commercial/Industrial															
NEPM (1999) HSL D Comm/Indust - Asbestos															
NEPM (1999) EIL - Urban Residential & Open Space															170
NEPM (1999) ESL - Urban Residential & Open Space (fine)												1300	5600		
NEPM (1999) EIL - Commercial/Industrial															370
NEPM (1999) ESL - Commercial/Industrial (fine)												2500	6600		
NEPM (1999) HSL B Residential - Asbestos															
AI_TP209_0.3	AI_TP209	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP21_0.1	AI_TP21	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP21_0.3	AI_TP21	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP210_0.1	AI_TP210	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP210_0.3	AI_TP210	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP211_0.1	AI_TP211	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP211_0.3	AI_TP211	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP212_0.1	AI_TP212	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP212_0.3	AI_TP212	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP213_0.1	AI_TP213	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP213_0.3	AI_TP213	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP214_0.1	AI_TP214	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP214_0.3	AI_TP214	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP215_0.1	AI_TP215	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	100	<100	100	<0.5
AI_TP215_0.3	AI_TP215	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP216_0.1	AI_TP216	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP216_0.4	AI_TP216	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP217_0.1	AI_TP217	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP217_0.3	AI_TP217	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP218_0.1	AI_TP218	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP218_0.3	AI_TP218	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP219_0.1	AI_TP219	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP219_0.3	AI_TP219	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP22_0.1	AI_TP22	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP22_0.3	AI_TP22	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP220_0.1	AI_TP220	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP220_0.3	AI_TP220	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP221_0.1	AI_TP221	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP221_0.3	AI_TP221	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP222_0.1	AI_TP222	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP222_0.3	AI_TP222	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP223_0.1	AI_TP223	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP223_0.3	AI_TP223	2/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP224_0.1	AI_TP224	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP224_0.3	AI_TP224	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP225_0.1	AI_TP225	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP225_0.4	AI_TP225	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP226_0.1	AI_TP226	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP226_0.3	AI_TP226	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP227_0.1	AI_TP227	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP227_0.3	AI_TP227	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP228_0.1	AI_TP228	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP228_0.3	AI_TP228	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP229_0.1	AI_TP229	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP229_0.3	AI_TP229	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP23_0.1	AI_TP23	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP23_0.4	AI_TP23	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP230_0.1	AI_TP230	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP230_0.3	AI_TP230	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP231_0.1	AI_TP231	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP231_0.3	AI_TP231	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP232_0.1	AI_TP232	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP232_0.3	AI_TP232	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP233_0.1	AI_TP233	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP233_0.3	AI_TP233	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP234_0.1	AI_TP234	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5
AI_TP234_0.3	AI_TP234	3/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5

PAH

Field_ID	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m														5						
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m														NL						
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m														NL						
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m														NL						
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m														NL						
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m														NL						
NEPM (1999) Management Limits - Commercial/Industrial (fine)																				
NEPM (1999) Management Limits - Urban residential & open space (fine)																				
NEPM (1999) HIL A - Residential (garden)																			3	300
NEPM (1999) HSL A Residential - Asbestos																				
NEPM (1999) HIL C - Recreation																			3	300
NEPM (1999) HSL C Recreation - Asbestos																				
NEPM (1999) HIL D - Commercial/Industrial																			40	4000
NEPM (1999) HSL D Comm/Indust - Asbestos																				
NEPM (1999) EIL - Urban Residential & Open Space														170						
NEPM (1999) ESL - Urban Residential & Open Space (fine)					0.7															
NEPM (1999) EIL - Commercial/Industrial														370						
NEPM (1999) ESL - Commercial/Industrial (fine)					0.7															
NEPM (1999) HSL B Residential - Asbestos																				
AI_TP209_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP21_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP21_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP210_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP210_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP211_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP211_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP212_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP212_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP213_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP213_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP214_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP214_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP215_0.1	-	-	<0.5	<0.5	-	<0.5	-	-	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	0.6	-	<0.5	<0.5
AI_TP215_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5
AI_TP216_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP216_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP217_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP217_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP218_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP218_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP219_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP219_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP22_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP22_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP220_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP220_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP221_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP221_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP222_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP222_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP223_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP223_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP224_0.1	<0.5	<0.5	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5
AI_TP224_0.3	-	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	-	0.6	1.2	-	<0.5
AI_TP225_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP225_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP226_0.1	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
AI_TP226_0.3	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	-	-	<0.5	<0.5
AI_TP227_0.1	<0.5	-	<0.5	-	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	-	-	-	<0.5
AI_TP227_0.3	<0.5	-	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	0.6	-	-	<0.5
AI_TP228_0.1	-	-	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	0.6	-	<0.5	<0.5
AI_TP228_0.3	-	-	-	<0.5	<0.5	-	-	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5
AI_TP229_0.1	<0.5	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	0.6	-	<0.5	<0.5
AI_TP229_0.3	<0.5	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	<0.5
AI_TP23_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP23_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP230_0.1	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5
AI_TP230_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	-	-	-	<0.5	<0.5	-	-	1.2	-	<0.5
AI_TP231_0.1	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	-	1.2	-	<0.5
AI_TP231_0.3	-	-	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	-	-	<0.5
AI_TP232_0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	1.2	<0.5	<0.5
AI_TP232_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	0.6	-	<0.5	<0.5
AI_TP233_0.1	-	-	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	-	-	-	<0.5
AI_TP233_0.3	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
AI_TP234_0.1	<0.5	-	<0.5	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	1.2	-	<0.5
AI_TP234_0.3	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	<0.5	-	-	-	0.6	-	<0.5	<0.5

TPH / Volatile

Field_ID	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	TRH C10-C36 (Total) (after silica gel clean-up)	C10-C14	C15-C28	C29-C36	C10-C36	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	50	100	100	100	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m									0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m									1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m									NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m									NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m									4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m									6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)														
NEPM (1999) Management Limits - Urban residential & open space (fine)														
NEPM (1999) HIL A - Residential (garden)														
NEPM (1999) HSL A Residential - Asbestos														
NEPM (1999) HIL C - Recreation														
NEPM (1999) HSL C Recreation - Asbestos														
NEPM (1999) HIL D - Commercial/Industrial														
NEPM (1999) HSL D Comm/Indust - Asbestos														
NEPM (1999) EIL - Urban Residential & Open Space														
NEPM (1999) ESL - Urban Residential & Open Space (fine)									65	105	125			45
NEPM (1999) EIL - Commercial/Industrial														
NEPM (1999) ESL - Commercial/Industrial (fine)									95	135	185			95
NEPM (1999) HSL B Residential - Asbestos														
AI_TP209_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP21_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP21_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP210_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP210_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP211_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP211_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP212_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP212_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP213_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP213_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP214_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP214_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP215_0.1	-	-	-	-	<20	<50	86	86	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP215_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP216_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP216_0.4	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP217_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP217_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP218_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP218_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP219_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP219_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP22_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP22_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP220_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP220_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP221_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP221_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP222_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP222_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP223_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP223_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP224_0.1	-	-	-	-	<20	<50	<50	<50	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP224_0.3	-	-	-	-	<20	<50	<50	<50	-	-	<0.1	<0.2	<0.1	-
AI_TP225_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP225_0.4	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP226_0.1	-	-	-	-	<20	<50	<50	<50	-	<0.1	<0.1	-	<0.1	-
AI_TP226_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP227_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	-	<0.1	<0.2	<0.1	-
AI_TP227_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	-	<0.1	<0.2	<0.1	-
AI_TP228_0.1	-	-	-	-	<20	<50	<50	<50	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP228_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP229_0.1	-	-	-	-	<20	<50	<50	<50	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP229_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	-	<0.1	-
AI_TP23_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP23_0.4	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP230_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP230_0.3	-	-	-	-	<20	<50	<50	<50	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP231_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP231_0.3	-	-	-	-	<20	<50	<50	<50	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP232_0.1	-	-	-	-	<20	<50	<50	<50	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP232_0.3	-	-	-	-	<20	<50	<50	<50	<0.1	-	<0.1	<0.2	<0.1	-
AI_TP233_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	-	-	<0.2	<0.1	-
AI_TP233_0.3	-	-	-	-	<20	<50	<50	<50	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP234_0.1	-	-	-	-	<20	<50	<50	<50	<0.1	-	<0.1	<0.2	<0.1	-
AI_TP234_0.3	-	-	-	-	<20	<50	<50	<50	-	<0.1	<0.1	<0.2	<0.1	-

			Organic													PAH																				TPH								Volatile					
			>C10 - C40 Fraction (sum) (SG)	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	TRH C10-C36 (Total) (after silica gel clean-up)	C10-C14	C15-C28	C29-C36	C10-C36	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			100	50	100	100	20	20	20	50	50	100	100	100	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	50	100	100	100	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m									50		280				5														5															0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m									90		NL				NL														NL															1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m									310		NL				NL														NL															4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m									480		NL				NL														NL															6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)								800		1000		5000	10000																																				
NEPM (1999) Management Limits - Urban residential & open space (fine)								800		1000		3500	10000																																				
NEPM (1999) HIL A - Residential (garden)																																		3	300														
NEPM (1999) HSL A Residential - Asbestos																																																	
NEPM (1999) HIL C - Recreation																																		3	300														
NEPM (1999) HSL C Recreation - Asbestos																																																
NEPM (1999) HIL D - Commercial/Industrial																																		40	4000														
NEPM (1999) HSL D Comm/Indust - Asbestos																																																
NEPM (1999) EIL - Urban Residential & Open Space															170														170																				
NEPM (1999) ESL - Urban Residential & Open Space (fine)												1300	5600								0.7																							65	105	125			45
NEPM (1999) EIL - Commercial/Industrial															370														370																				
NEPM (1999) ESL - Commercial/Industrial (fine)												2500	6600								0.7																							95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																
Field_ID	LocCode	Sampled_Date-Time																																															
AI_TP235_0.1	AI_TP235	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP235_0.3	AI_TP235	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP236_0.1	AI_TP236	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP236_0.3	AI_TP236	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP237_0.1	AI_TP237	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP237_0.3	AI_TP237	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP238_0.1	AI_TP238	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP238_0.3	AI_TP238	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP239_0.1	AI_TP239	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP239_0.3	AI_TP239	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP24_0.1	AI_TP24	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP24_0.3	AI_TP24	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP240_0.1	AI_TP240	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP240_0.3	AI_TP240	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP242_0.1	AI_TP242	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP242_0.3	AI_TP242	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP243_0.1	AI_TP243	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP243_0.3	AI_TP243	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP244_0.1	AI_TP244	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP244_0.3	AI_TP244	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP245_0.1	AI_TP245	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP245_0.3	AI_TP245	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP246_0.1	AI_TP246	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	54	54	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP246_0.3	AI_TP246	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP247_0.1	AI_TP247	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP247_0.3	AI_TP247	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP248_0.1	AI_TP248	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP248_0.3	AI_TP248	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP249_0.1	AI_TP249	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP249_0.3	AI_TP249	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP25_0.1	AI_TP25	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP25_0.3	AI_TP25	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP250_0.1	AI_TP250	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP250_0.3	AI_TP250	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP251_0.1	AI_TP251	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP251_0.3	AI_TP251	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP252_0.1	AI_TP252	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP252_0.3	AI_TP252	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP253_0.1	AI_TP253	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP253_0.3	AI_TP253	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP254_0.1	AI_TP254	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP254_0.3	AI_TP254	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	130	130	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	73	73	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP255_0.1	AI_TP255	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP255_0.3	AI_TP255	1/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP263_0.1	AI_TP263	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP263_0.3	AI_TP263	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP264_0.1	AI_TP264	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP264_0.3	AI_TP264	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP265_0.1	AI_TP265	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP265_0.3	AI_TP265	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP266_0.1	AI_TP266	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP266_0.3	AI_TP266	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP267_0.1	AI_TP267	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP267_0.3	AI_TP267	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP268_0.1	AI_TP268	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	140	<100	140	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	56	99	155	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP268_0.3	AI_TP268	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP269_0.1	AI_TP269	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

			Organic													PAH																				TPH								Volatile					
			>C10 - C40 Fraction (sum) (SG)	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	TRH C10-C36 (Total) (after silica gel clean-up)	C10-C14	C15-C28	C29-C36	C10-C36	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			100	50	100	100	20	20	20	50	50	100	100	100	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	50	100	100	100	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m									50		280				5														5															0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m									90		NL				NL														NL															1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m									310		NL				NL														NL															4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m									480		NL				NL														NL															6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)								800		1000		5000	10000																																				
NEPM (1999) Management Limits - Urban residential & open space (fine)								800		1000		3500	10000																																				
NEPM (1999) HIL A - Residential (garden)																																		3	300														
NEPM (1999) HSL A Residential - Asbestos																																																	
NEPM (1999) HIL C - Recreation																																		3	300														
NEPM (1999) HSL C Recreation - Asbestos																																																	
NEPM (1999) HIL D - Commercial/Industrial																																		40	4000														
NEPM (1999) HSL D Comm/Indust - Asbestos																																																	
NEPM (1999) EIL - Urban Residential & Open Space															170														170																				
NEPM (1999) ESL - Urban Residential & Open Space (fine)												1300	5600							0.7																								65	105	125			45
NEPM (1999) EIL - Commercial/Industrial															370														370																				
NEPM (1999) ESL - Commercial/Industrial (fine)												2500	6600							0.7																								95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																	
Field_ID	**LocCode**	**Sampled_Date-Time**																																															
AI_TP269_0.3	AI_TP269	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP27_0.1	AI_TP27	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP27_0.4	AI_TP27	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP270_0.1	AI_TP270	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP270_0.3	AI_TP270	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP271_0.1	AI_TP271	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP271_0.3	AI_TP271	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP272_0.1	AI_TP272	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP272_0.3	AI_TP272	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP277_0.1	AI_TP277	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP277_0.3	AI_TP277	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP278_0.1	AI_TP278	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP278_0.3	AI_TP278	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP279_0.1	AI_TP279	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP279_0.3	AI_TP279	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP28_0.1	AI_TP28	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP28_0.5	AI_TP28	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP280_0.1	AI_TP280	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	50	50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP280_0.3	AI_TP280	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP281_0.1	AI_TP281	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP281_0.3	AI_TP281	29/10/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP29_0.1	AI_TP29	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP29_0.3	AI_TP29	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP30_0.1	AI_TP30	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP30_0.3	AI_TP30	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP31_0.1	AI_TP31	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP31_0.3	AI_TP31	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP32_0.1	AI_TP32	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP32_0.4	AI_TP32	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP33-0.1	AI_TP33	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP34-0.1	AI_TP34	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP35-0.1	AI_TP35	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP35-0.2	AI_TP35	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP36_0.1	AI_TP36	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP36_0.4	AI_TP36	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP36-0.1	AI_TP36	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP36-0.3	AI_TP36	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP37_0.1	AI_TP37	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP37_0.4	AI_TP37	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP39_0.1	AI_TP39	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP39_0.3	AI_TP39	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP40_0.1	AI_TP40	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP40_0.3	AI_TP40	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP41_0.1	AI_TP41	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP41_0.3	AI_TP41	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP42_0.1	AI_TP42	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP42_0.4	AI_TP42	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP43-0.1	AI_TP43	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP43-0.3	AI_TP43	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP45_0.1	AI_TP45	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP45_0.3	AI_TP45	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP46_0.1	AI_TP46	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP46_0.4	AI_TP46	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP47_0.1	AI_TP47	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP47_0.4	AI_TP47	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP48_0.1	AI_TP48	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP48_0.4	AI_TP48	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

ERM

			Organic													PAH																				TPH								Volatile					
			>C10 - C40 Fraction (sum) (SG)	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	TRH C10-C36 (Total) (after silica gel clean-up)	C10-C14	C15-C28	C29-C36	C10-C36	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			100	50	100	100	20	20	20	50	50	100	100	100	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	50	100	100	100	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m									50		280				5														5															0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m									90		NL				NL														NL															1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m									NL		NL				NL														NL															NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m									310		NL				NL														NL															4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m									480		NL				NL														NL															6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)								800		1000		5000	10000																																				
NEPM (1999) Management Limits - Urban residential & open space (fine)								800		1000		3500	10000																																				
NEPM (1999) HIL A - Residential (garden)																																		3	300														
NEPM (1999) HSL A Residential - Asbestos																																																	
NEPM (1999) HIL C - Recreation																																		3	300														
NEPM (1999) HSL C Recreation - Asbestos																																																	
NEPM (1999) HIL D - Commercial/Industrial																																		40	4000														
NEPM (1999) HSL D Comm/Indust - Asbestos																																																	
NEPM (1999) EIL - Urban Residential & Open Space															170														170																				
NEPM (1999) ESL - Urban Residential & Open Space (fine)												1300	5600								0.7																							65	105	125			45
NEPM (1999) EIL - Commercial/Industrial															370														370																				
NEPM (1999) ESL - Commercial/Industrial (fine)												2500	6600								0.7																							95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																	
Field_ID	LocCode	Sampled_Date-Time																																															
AI_TP49_0.1	AI_TP49	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP49_0.3	AI_TP49	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP50_0.1	AI_TP50	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP50_0.3	AI_TP50	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP51_0.1	AI_TP51	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP51_0.3	AI_TP51	4/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP54-0.1	AI_TP54	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP54-0.3	AI_TP54	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP55-0.1	AI_TP55	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP55-0.3	AI_TP55	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP56-0.1	AI_TP56	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP56-0.3	AI_TP56	9/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP58_0.1	AI_TP58	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP58_0.4	AI_TP58	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP59_0.1	AI_TP59	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP59_0.4	AI_TP59	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP60_0.1	AI_TP60	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP60_0.5	AI_TP60	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP61_0.1	AI_TP61	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP61_0.4	AI_TP61	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP62_0.1	AI_TP62	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP62_0.4	AI_TP62	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP66_0.1	AI_TP66	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP66_0.4	AI_TP66	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP67_0.1	AI_TP67	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP67_0.4	AI_TP67	17/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP71_0.1	AI_TP71	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP71_0.4	AI_TP71	20/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP75_0.1	AI_TP75	21/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP75_0.4	AI_TP75	21/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP76_0.1	AI_TP76	21/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP76_0.4	AI_TP76	21/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP78_0.1	AI_TP78	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP78_0.3	AI_TP78	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP79_0.4	AI_TP79	21/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP80_0.4	AI_TP80	21/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP81_0.1	AI_TP81	21/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP81_0.4	AI_TP81	21/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP82_0.1	AI_TP82	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP82_0.3	AI_TP82	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP83_0.1	AI_TP83	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP83_0.3	AI_TP83	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	57	57	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP84_0.1	AI_TP84	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	100	<100	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	52	75	127	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP84_0.3	AI_TP84	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP85_0.3	AI_TP85	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP86_0.1	AI_TP86	21/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP86_0.4	AI_TP86	21/12/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP88_0.1	AI_TP88	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP88_0.3	AI_TP88	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP89_0.1	AI_TP89	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP89_0.3	AI_TP89	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP90_0.1	AI_TP90	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	180	<100	180	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	94	120	214	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP90_0.3	AI_TP90	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP91_0.1	AI_TP91	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP91_0.3	AI_TP91	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP92_0.3	AI_TP92	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	160	120	280	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	65	120	185	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP92_0.5	AI_TP92	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

	Organic													PAH																				TPH								Volatile					
	>C10 - C40 Fraction (sum) (SG)	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	TRH C10-C36 (Total) (after silica gel clean-up)	C10-C14	C15-C28	C29-C36	C10-C36	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	100	50	100	100	20	20	20	50	50	100	100	100	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	50	100	100	100	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m							50		280				5														5																0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m							90		NL				NL														NL																1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m							NL		NL				NL														NL																NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m							NL		NL				NL														NL																NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m							310		NL				NL														NL																4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m							480		NL				NL														NL																6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)						800		1000		5000	10000																																					
NEPM (1999) Management Limits - Urban residential & open space (fine)						800		1000		3500	10000																																					
NEPM (1999) HIL A - Residential (garden)																																3	300														
NEPM (1999) HSL A Residential - Asbestos																																															
NEPM (1999) HIL C - Recreation																																3	300														
NEPM (1999) HSL C Recreation - Asbestos																																															
NEPM (1999) HIL D - Commercial/Industrial																																40	4000														
NEPM (1999) HSL D Comm/Indust - Asbestos																																															
NEPM (1999) EIL - Urban Residential & Open Space													170														170																				
NEPM (1999) ESL - Urban Residential & Open Space (fine)										1300	5600							0.7																									65	105	125			45
NEPM (1999) EIL - Commercial/Industrial													370														370																				
NEPM (1999) ESL - Commercial/Industrial (fine)										2500	6600							0.7																									95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																															

Field_ID	LocCode	Sampled_Date-Time																																														
AI_TP93_0.3	AI_TP93	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP93_0.1	AI_TP93	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP94_0.3	AI_TP94	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP94_0.1	AI_TP94	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP95_0.3	AI_TP95	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP95_0.1	AI_TP95	8/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	51	51	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP96_0.1	AI_TP96	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	52	52	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP96_0.3	AI_TP96	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP98_0.1	AI_TP98	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	140	<100	140	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	74	89	163	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP98_0.3	AI_TP98	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP99_0.3	AI_TP99	15/11/2021	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	-	-	-	-	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

Statistical Summary

Number of Results	1	1	1	1	466	466	466	466	466	466	466	466	466	452	448	456	450	451	452	450	448	457	461	455	448	452	455	460	461	447	445	452	466	1	1	1	1	466	466	466	466	453	455	465	463	465	437
Number of Detects	0	0	0	0	0	0	0	1	1	17	3	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	447	445	0	0	0	0	0	0	2	20	47	48	0	0	0	0	0	0
Minimum Concentration	<100	<50	<100	<100	<20	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<50	<100	<100	<100	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	66	66	100	120	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6	1.2	ND	ND	ND	ND	ND	ND	26	50	50	50	ND	ND	ND	ND	ND	ND
Maximum Concentration	<100	<50	<100	<100	<20	<20	<20	66	66	710	410	1186	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.2	2.4	<1	<1	<50	<100	<100	<100	39	300	550	889	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	66	66	710	410	1186	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	2.4	ND	ND	ND	ND	ND	ND	39	300	550	889	ND	ND	ND	ND	ND	ND
Average Concentration					10	10	10	25	25	54	51	56	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.25					10	27	30	34	0.05	0.05	0.05	0.1	0.05	0.15
Median Concentration	50	25	50	50	10	10	10	25	25	50	50	50	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.25	25	50	50	50	10	25	25	25	0.05	0.05	0.05	0.1	0.05	0.15
Standard Deviation					0	0	0	1.9	1.9	34	17	56	0	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.028	0.057	0.012	0.012					1.5	15	28	48	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	10	5	5	50	5	10	5	5
NEMP (2020) HIL A - Residential with garden/accessible soil													100									10		10											10			
NEMP (2020) HIL C - Public open space													10000									1000		1000											1000			
NEMP (2020) HIL D - Industrial/ commercial													50000									20000		20000											20000			
NEMP (2020) Ecological (direct exposure)													10000											1000														
NEMP (2020) Ecological (indirect exposure)																								10														
NEMP (2020) HIL B - Residential with minimal opportunities for soil access													20000									2000		2000											2000			
PFAS NEMP 2020 Clay/Single Composite Lined Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Double Composite Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Unlined Landfill Acceptance Criteria																								20000														
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
A1_TP128_0.1	A1_TP128	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP128_0.3	A1_TP128	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP129_0.1	A1_TP129	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP129_0.3	A1_TP129	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP130_0.1	A1_TP130	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP130_0.3	A1_TP130	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP131_0.1	A1_TP131	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP131_0.3	A1_TP131	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP153_0.1	A1_TP153	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP153_0.3	A1_TP153	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP159_0.3	A1_TP159	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP256_0.1	A1_TP256	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP256_0.3	A1_TP256	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP257_0.1	A1_TP257	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP257_0.3	A1_TP257	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP258_0.1	A1_TP258	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP258_0.3	A1_TP258	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP259_0.1	A1_TP259	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP259_0.3	A1_TP259	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP260_0.1	A1_TP260	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP260_0.3	A1_TP260	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP262_0.1	A1_TP262	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP262_0.3	A1_TP262	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP303_0.1	A1_TP303	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP303_0.3	A1_TP303	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
A1_TP305_0.1	A1_TP305	16/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	10	5	5	50	5	10	5	5
NEMP (2020) HIL A - Residential with garden/accessible soil													100									10		10											10			
NEMP (2020) HIL C - Public open space													10000									1000		1000											1000			
NEMP (2020) HIL D - Industrial/ commercial													50000									20000		20000											20000			
NEMP (2020) Ecological (direct exposure)													10000											1000														
NEMP (2020) Ecological (indirect exposure)																								10														
NEMP (2020) HIL B - Residential with minimal opportunities for soil access													20000									2000		2000											2000			
PFAS NEMP 2020 Clay/Single Composite Lined Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Double Composite Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Unlined Landfill Acceptance Criteria																								20000														
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
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			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	10	5	5	50	5	10	5	5
NEMP (2020) HIL A - Residential with garden/accessible soil													100									10		10											10			
NEMP (2020) HIL C - Public open space													10000									1000		1000											1000			
NEMP (2020) HIL D - Industrial/ commercial													50000									20000		20000											20000			
NEMP (2020) Ecological (direct exposure)													10000											1000														
NEMP (2020) Ecological (indirect exposure)																								10														
NEMP (2020) HIL B - Residential with minimal opportunities for soil access													20000									2000		2000											2000			
PFAS NEMP 2020 Clay/Single Composite Lined Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Double Composite Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Unlined Landfill Acceptance Criteria																								20000														
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
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AI_TP143_0.3	AI_TP143	8/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP143_0.1	AI_TP143	8/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP144_0.1	AI_TP144	8/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP144_0.2	AI_TP144	8/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP146_0.1	AI_TP146	8/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	10	5	5	50	5	10	5	5
NEMP (2020) HIL A - Residential with garden/accessible soil													100									10		10											10			
NEMP (2020) HIL C - Public open space													10000									1000		1000											1000			
NEMP (2020) HIL D - Industrial/ commercial													50000									20000		20000											20000			
NEMP (2020) Ecological (direct exposure)													10000											1000														
NEMP (2020) Ecological (indirect exposure)																								10														
NEMP (2020) HIL B - Residential with minimal opportunities for soil access													20000									2000		2000											2000			
PFAS NEMP 2020 Clay/Single Composite Lined Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Double Composite Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Unlined Landfill Acceptance Criteria																								20000														
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
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AI_TP171_0.3	AI_TP171	27/10/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP173_0.4	AI_TP173	17/12/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP179_0.4	AI_TP179	17/12/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP18_0.2	AI_TP18	17/12/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP181_0.3	AI_TP181	3/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	10	5	5	50	5	10	5	5
NEMP (2020) HIL A - Residential with garden/accessible soil													100									10		10											10			
NEMP (2020) HIL C - Public open space													10000									1000		1000											1000			
NEMP (2020) HIL D - Industrial/ commercial													50000									20000		20000											20000			
NEMP (2020) Ecological (direct exposure)													10000											1000														
NEMP (2020) Ecological (indirect exposure)																								10														
NEMP (2020) HIL B - Residential with minimal opportunities for soil access													20000									2000		2000											2000			
PFAS NEMP 2020 Clay/Single Composite Lined Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Double Composite Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Unlined Landfill Acceptance Criteria																								20000														
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
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			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	10	5	5	50	5	10	5	5
NEMP (2020) HIL A - Residential with garden/accessible soil													100									10		10											10			
NEMP (2020) HIL C - Public open space													10000									1000		1000											1000			
NEMP (2020) HIL D - Industrial/ commercial													50000									20000		20000											20000			
NEMP (2020) Ecological (direct exposure)													10000											1000														
NEMP (2020) Ecological (indirect exposure)																								10														
NEMP (2020) HIL B - Residential with minimal opportunities for soil access													20000									2000		2000											2000			
PFAS NEMP 2020 Clay/Single Composite Lined Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Double Composite Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Unlined Landfill Acceptance Criteria																								20000														
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
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			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	10	5	5	50	5	10	5	5
NEMP (2020) HIL A - Residential with garden/accessible soil													100									10		10											10			
NEMP (2020) HIL C - Public open space													10000									1000		1000											1000			
NEMP (2020) HIL D - Industrial/ commercial													50000									20000		20000											20000			
NEMP (2020) Ecological (direct exposure)													10000											1000														
NEMP (2020) Ecological (indirect exposure)																								10														
NEMP (2020) HIL B - Residential with minimal opportunities for soil access													20000									2000		2000											2000			
PFAS NEMP 2020 Clay/Single Composite Lined Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Double Composite Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Unlined Landfill Acceptance Criteria																								20000														
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
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AI_TP263_0.3	AI_TP263	29/10/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP266_0.1	AI_TP266	29/10/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP271_0.3	AI_TP271	29/10/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	10	5	5	50	5	10	5	5
NEMP (2020) HIL A - Residential with garden/accessible soil													100									10		10											10			
NEMP (2020) HIL C - Public open space													10000									1000		1000											1000			
NEMP (2020) HIL D - Industrial/ commercial													50000									20000		20000											20000			
NEMP (2020) Ecological (direct exposure)													10000											1000														
NEMP (2020) Ecological (indirect exposure)																								10														
NEMP (2020) HIL B - Residential with minimal opportunities for soil access													20000									2000		2000											2000			
PFAS NEMP 2020 Clay/Single Composite Lined Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Double Composite Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Unlined Landfill Acceptance Criteria																								20000														
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
AI_TP37_0.4	AI_TP37	20/12/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP40_0.3	AI_TP40	4/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP79_0.4	AI_TP79	21/12/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5

			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	10	5	5	50	5	10	5	5
NEMP (2020) HIL A - Residential with garden/accessible soil													100									10		10											10			
NEMP (2020) HIL C - Public open space													10000									1000		1000											1000			
NEMP (2020) HIL D - Industrial/ commercial													50000									20000		20000											20000			
NEMP (2020) Ecological (direct exposure)													10000											1000														
NEMP (2020) Ecological (indirect exposure)																								10														
NEMP (2020) HIL B - Residential with minimal opportunities for soil access													20000									2000		2000											2000			
PFAS NEMP 2020 Clay/Single Composite Lined Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Double Composite Landfill Acceptance Criteria																								50000														
PFAS NEMP 2020 Unlined Landfill Acceptance Criteria																								20000														
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
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AI_TP90_0.1	AI_TP90	15/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP90_0.3	AI_TP90	15/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP91_0.1	AI_TP91	15/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP92_0.3	AI_TP92	15/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP92_0.5	AI_TP92	15/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP93_0.3	AI_TP93	8/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
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AI_TP94_0.3	AI_TP94	8/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP94_0.1	AI_TP94	8/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP95_0.3	AI_TP95	8/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP95_0.1	AI_TP95	8/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP96_0.1	AI_TP96	15/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP96_0.3	AI_TP96	15/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP98_0.1	AI_TP98	15/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP98_0.3	AI_TP98	15/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
AI_TP99_0.3	AI_TP99	15/11/2021	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5

Statistical Summary

Number of Results	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Minimum Concentration	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.8	ND	6.8	6.8
Maximum Concentration	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6.8	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	6.8	<10	6.8	6.8
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.8	ND	6.8	6.8
Average Concentration	2.5	2.5	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5	2.5	2.5	5	2.5	2.5	25	2.5	5	2.5	2.5
Median Concentration	2.5	2.5	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5	2.5	2.5	5	2.5	2.5	25	2.5	5	2.5	2.5
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)							6		50					240					10				6		10	300	20
NEPM (1999) HSL A Residential - Asbestos																											
NEPM (1999) HIL C - Recreation							10		70					400					20				10		10	400	30
NEPM (1999) HSL C Recreation - Asbestos																											
NEPM (1999) HIL D - Commercial/Industrial							45		530					3600					100				50		80	2500	160
NEPM (1999) HSL D Comm/Indust - Asbestos																											
NEPM (1999) EIL - Urban Residential & Open Space													180														
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial													640														
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	LocCode	Sampled_Date-Time																									
A1_TP128_0.1	A1_TP128	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP128_0.3	A1_TP128	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP129_0.1	A1_TP129	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP129_0.3	A1_TP129	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP130_0.1	A1_TP130	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP130_0.3	A1_TP130	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP131_0.1	A1_TP131	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP131_0.3	A1_TP131	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP153_0.1	A1_TP153	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP153_0.3	A1_TP153	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP159_0.3	A1_TP159	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP256_0.1	A1_TP256	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP256_0.3	A1_TP256	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP257_0.1	A1_TP257	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP257_0.3	A1_TP257	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP258_0.1	A1_TP258	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP258_0.3	A1_TP258	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP259_0.1	A1_TP259	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP259_0.3	A1_TP259	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP260_0.1	A1_TP260	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP260_0.3	A1_TP260	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP262_0.1	A1_TP262	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP262_0.3	A1_TP262	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP303_0.1	A1_TP303	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP303_0.3	A1_TP303	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP305_0.1	A1_TP305	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP305_0.3	A1_TP305	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP315_0.1	A1_TP315	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP315_0.3	A1_TP315	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP36_0.1	A1_TP36	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
A1_TP36_0.3	A1_TP36	16/06/2022	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)							6		50				240						10				6		10	300	20
NEPM (1999) HSL A Residential - Asbestos																											
NEPM (1999) HIL C - Recreation							10		70				400						20				10		10	400	30
NEPM (1999) HSL C Recreation - Asbestos																											
NEPM (1999) HIL D - Commercial/Industrial							45		530				3600						100				50		80	2500	160
NEPM (1999) HSL D Comm/Indust - Asbestos																											
NEPM (1999) EIL - Urban Residential & Open Space												180															
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial												640															
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP02-0.3	AI_TP02	9/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP03-0.3	AI_TP03	9/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP05_0.1	AI_TP05	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP05_0.3	AI_TP05	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP06_0	AI_TP06	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP08_0.1	AI_TP08	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP08_0.3	AI_TP08	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP09_0.4	AI_TP09	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP100_0.3	AI_TP100	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP101_0.3	AI_TP101	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP102_0.3	AI_TP102	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP102_0.1	AI_TP102	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP103_0.3	AI_TP103	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP103_0.1	AI_TP103	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP104_0.3	AI_TP104	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP104_0.1	AI_TP104	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP105_0.4	AI_TP105	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP107_0.3	AI_TP107	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP108_0.5	AI_TP108	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP109_0.3	AI_TP109	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP110_0.3	AI_TP110	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP111_0.3	AI_TP111	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP111_0.1	AI_TP111	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP112_0.3	AI_TP112	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP112_0.1	AI_TP112	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP113_0.3	AI_TP113	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP113_0.1	AI_TP113	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP115_0.3	AI_TP115	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP116_0.1	AI_TP116	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP117_0.1	AI_TP117	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP117_0.2	AI_TP117	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP118_0.1	AI_TP118	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP118_0.2	AI_TP118	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP119_0.3	AI_TP119	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP119_0.1	AI_TP119	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP12_0.1	AI_TP12	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP12_0.3	AI_TP12	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP120_0.3	AI_TP120	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP120_0.1	AI_TP120	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP121_0.3	AI_TP121	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP121_0.1	AI_TP121	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP122_0.3	AI_TP122	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP122_0.1	AI_TP122	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP123_0.3	AI_TP123	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP123_0.1	AI_TP123	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP124_0.3	AI_TP124	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP124_0.1	AI_TP124	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP125_0.3	AI_TP125	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP125_0.1	AI_TP125	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)							6		50				240						10				6		10	300	20
NEPM (1999) HSL A Residential - Asbestos																											
NEPM (1999) HIL C - Recreation							10		70				400						20				10		10	400	30
NEPM (1999) HSL C Recreation - Asbestos																											
NEPM (1999) HIL D - Commercial/Industrial							45		530				3600						100				50		80	2500	160
NEPM (1999) HSL D Comm/Indust - Asbestos																											
NEPM (1999) EIL - Urban Residential & Open Space												180															
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial												640															
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP126_0.3	AI_TP126	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP126_0.1	AI_TP126	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP127_0.3	AI_TP127	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP127_0.1	AI_TP127	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP13_0.1	AI_TP13	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP13_0.3	AI_TP13	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP132_0.1	AI_TP132	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP132_0.3	AI_TP132	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP133_0.1	AI_TP133	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP133_0.3	AI_TP133	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP134_0.1	AI_TP134	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP134_0.3	AI_TP134	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP135_0.1	AI_TP135	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP135_0.3	AI_TP135	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP136_0.1	AI_TP136	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP136_0.3	AI_TP136	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP137_0.1	AI_TP137	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP137_0.3	AI_TP137	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP138_0.1	AI_TP138	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP138_0.3	AI_TP138	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP139_0.1	AI_TP139	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP139_0.3	AI_TP139	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP14_0.4	AI_TP14	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP140_0.1	AI_TP140	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP140_0.3	AI_TP140	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP141_0.1	AI_TP141	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP141_0.3	AI_TP141	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP142_0.3	AI_TP142	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP142_0.1	AI_TP142	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	0.09	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP143_0.3	AI_TP143	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP143_0.1	AI_TP143	8/11/2021	1.33	1	<0.05	<0.05	<0.05	0.33	<0.05	1	<0.05	<0.05	<0.05	<0.05	0.33	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP144_0.1	AI_TP144	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP145_0.3	AI_TP145	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP145_0.1	AI_TP145	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP146_0.3	AI_TP146	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP146_0.1	AI_TP146	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP147_0.3	AI_TP147	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP147_0.1	AI_TP147	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP148_0.3	AI_TP148	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP148_0.1	AI_TP148	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP149_0.3	AI_TP149	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP149_0.1	AI_TP149	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP15-0.3	AI_TP15	9/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP150_0.1	AI_TP150	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP150_0.3	AI_TP150	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP151_0.1	AI_TP151	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP151_0.3	AI_TP151	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
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NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)							6		50				240						10				6		10	300	20
NEPM (1999) HSL A Residential - Asbestos																											
NEPM (1999) HIL C - Recreation							10		70				400						20				10		10	400	30
NEPM (1999) HSL C Recreation - Asbestos																											
NEPM (1999) HIL D - Commercial/Industrial							45		530				3600						100				50		80	2500	160
NEPM (1999) HSL D Comm/Indust - Asbestos																											
NEPM (1999) EIL - Urban Residential & Open Space												180															
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial												640															
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP152_0.1	AI_TP152	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP152_0.3	AI_TP152	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP158_0.1	AI_TP158	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP158_0.3	AI_TP158	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP16_0.3	AI_TP16	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP160_0.3	AI_TP160	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP163_0.1	AI_TP163	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP163_0.3	AI_TP163	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP164_0.1	AI_TP164	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP164_0.4	AI_TP164	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP165_0.1	AI_TP165	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP165_0.3	AI_TP165	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP166_0.1	AI_TP166	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP166_0.3	AI_TP166	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP167_0.1	AI_TP167	27/10/2021	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
AI_TP167_0.3	AI_TP167	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP168_0.1	AI_TP168	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP168_0.3	AI_TP168	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP169_0.1	AI_TP169	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP169_0.3	AI_TP169	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP170_0.1	AI_TP170	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP170_0.3	AI_TP170	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP171_0.1	AI_TP171	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP171_0.3	AI_TP171	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP172_0.1	AI_TP172	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP172_0.3	AI_TP172	27/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP173_0.4	AI_TP173	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP176_0.1	AI_TP176	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP176_0.3	AI_TP176	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP177_0.4	AI_TP177	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP178_0.4	AI_TP178	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP179_0.4	AI_TP179	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP181_0.1	AI_TP181	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP181_0.3	AI_TP181	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP182_0.1	AI_TP182	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP182_0.3	AI_TP182	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP183_0.1	AI_TP183	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP183_0.3	AI_TP183	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP184_0.4	AI_TP184	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP186_0.1	AI_TP186	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP186_0.3	AI_TP186	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP187_0.1	AI_TP187	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP187_0.3	AI_TP187	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP188_0.1	AI_TP188	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP188_0.3	AI_TP188	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP189_0.1	AI_TP189	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP189_0.3	AI_TP189	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP19_0.3	AI_TP19	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP193_0.1	AI_TP193	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)						6		50				240					10				6		10	300	20
NEPM (1999) HSL A Residential - Asbestos																											
NEPM (1999) HIL C - Recreation						10		70				400					20				10		10	400	30
NEPM (1999) HSL C Recreation - Asbestos																											
NEPM (1999) HIL D - Commercial/Industrial						45		530				3600					100				50		80	2500	160
NEPM (1999) HSL D Comm/Indust - Asbestos																											
NEPM (1999) EIL - Urban Residential & Open Space											180																
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial											640																
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP193_0.3	AI_TP193	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP194_0.1	AI_TP194	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP194_0.3	AI_TP194	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP195_0.1	AI_TP195	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP195_0.3	AI_TP195	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP196_0.1	AI_TP196	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP196_0.3	AI_TP196	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP197_0.4	AI_TP197	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP20_0.4	AI_TP20	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP200_0.1	AI_TP200	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP200_0.3	AI_TP200	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP201_0.1	AI_TP201	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP201_0.3	AI_TP201	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP202_0.1	AI_TP202	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP202_0.3	AI_TP202	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP203_0.1	AI_TP203	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP203_0.3	AI_TP203	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP204_0.1	AI_TP204	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP204_0.3	AI_TP204	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP205_0.1	AI_TP205	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP205_0.3	AI_TP205	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP208_0.1	AI_TP208	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP208_0.3	AI_TP208	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP209_0.1	AI_TP209	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP209_0.3	AI_TP209	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP21_0.1	AI_TP21	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP21_0.3	AI_TP21	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP210_0.1	AI_TP210	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP210_0.3	AI_TP210	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP211_0.1	AI_TP211	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP211_0.3	AI_TP211	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP212_0.1	AI_TP212	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP212_0.3	AI_TP212	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP213_0.1	AI_TP213	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP213_0.3	AI_TP213	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP214_0.1	AI_TP214	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP214_0.3	AI_TP214	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP215_0.1	AI_TP215	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP215_0.3	AI_TP215	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP216_0.4	AI_TP216	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP217_0.1	AI_TP217	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP217_0.3	AI_TP217	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP218_0.1	AI_TP218	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP218_0.3	AI_TP218	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP219_0.1	AI_TP219	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP219_0.3	AI_TP219	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP22_0.1	AI_TP22	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP22_0.3	AI_TP22	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP220_0.1	AI_TP220	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)							6		50				240						10				6		10	300	20
NEPM (1999) HSL A Residential - Asbestos																											
NEPM (1999) HIL C - Recreation							10		70				400						20				10		10	400	30
NEPM (1999) HSL C Recreation - Asbestos																											
NEPM (1999) HIL D - Commercial/Industrial							45		530				3600						100				50		80	2500	160
NEPM (1999) HSL D Comm/Indust - Asbestos																											
NEPM (1999) EIL - Urban Residential & Open Space												180															
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial												640															
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP220_0.3	AI_TP220	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP221_0.1	AI_TP221	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP221_0.3	AI_TP221	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP222_0.1	AI_TP222	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP222_0.3	AI_TP222	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP223_0.1	AI_TP223	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP223_0.3	AI_TP223	2/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP224_0.1	AI_TP224	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP224_0.3	AI_TP224	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP225_0.4	AI_TP225	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP226_0.1	AI_TP226	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP226_0.3	AI_TP226	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP227_0.1	AI_TP227	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP227_0.3	AI_TP227	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP228_0.1	AI_TP228	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP228_0.3	AI_TP228	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP229_0.1	AI_TP229	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP229_0.3	AI_TP229	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP23_0.4	AI_TP23	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP230_0.1	AI_TP230	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP230_0.3	AI_TP230	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP231_0.1	AI_TP231	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP231_0.3	AI_TP231	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP232_0.1	AI_TP232	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP232_0.3	AI_TP232	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP233_0.1	AI_TP233	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP233_0.3	AI_TP233	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP234_0.1	AI_TP234	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP234_0.3	AI_TP234	3/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP235_0.1	AI_TP235	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP235_0.3	AI_TP235	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP236_0.1	AI_TP236	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP236_0.3	AI_TP236	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP237_0.1	AI_TP237	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP237_0.3	AI_TP237	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP238_0.1	AI_TP238	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP238_0.3	AI_TP238	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP239_0.1	AI_TP239	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP239_0.3	AI_TP239	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP24_0.3	AI_TP24	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP240_0.1	AI_TP240	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP240_0.3	AI_TP240	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP242_0.1	AI_TP242	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP242_0.3	AI_TP242	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP243_0.1	AI_TP243	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP243_0.3	AI_TP243	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP244_0.1	AI_TP244	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP244_0.3	AI_TP244	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP245_0.1	AI_TP245	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)							6		50				240						10				6		10	300	20
NEPM (1999) HSL A Residential - Asbestos																											
NEPM (1999) HIL C - Recreation							10		70				400						20				10		10	400	30
NEPM (1999) HSL C Recreation - Asbestos																											
NEPM (1999) HIL D - Commercial/Industrial							45		530				3600						100				50		80	2500	160
NEPM (1999) HSL D Comm/Indust - Asbestos																											
NEPM (1999) EIL - Urban Residential & Open Space												180															
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial												640															
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP245_0.3	AI_TP245	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP246_0.1	AI_TP246	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP246_0.3	AI_TP246	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP247_0.1	AI_TP247	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP247_0.3	AI_TP247	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP248_0.1	AI_TP248	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP248_0.3	AI_TP248	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP249_0.1	AI_TP249	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP249_0.3	AI_TP249	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP25_0.3	AI_TP25	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP250_0.1	AI_TP250	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP250_0.3	AI_TP250	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP251_0.1	AI_TP251	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP251_0.3	AI_TP251	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP252_0.1	AI_TP252	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP252_0.3	AI_TP252	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP253_0.1	AI_TP253	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP253_0.3	AI_TP253	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP254_0.1	AI_TP254	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP254_0.3	AI_TP254	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP255_0.1	AI_TP255	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP255_0.3	AI_TP255	1/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP263_0.1	AI_TP263	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP263_0.3	AI_TP263	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP264_0.1	AI_TP264	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP264_0.3	AI_TP264	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP265_0.1	AI_TP265	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP265_0.3	AI_TP265	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP266_0.1	AI_TP266	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP266_0.3	AI_TP266	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP267_0.1	AI_TP267	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP267_0.3	AI_TP267	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP268_0.1	AI_TP268	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP268_0.3	AI_TP268	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP269_0.1	AI_TP269	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP269_0.3	AI_TP269	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP27_0.4	AI_TP27	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP270_0.1	AI_TP270	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP270_0.3	AI_TP270	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP271_0.1	AI_TP271	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP271_0.3	AI_TP271	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP272_0.1	AI_TP272	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP272_0.3	AI_TP272	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP277_0.1	AI_TP277	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP277_0.3	AI_TP277	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP278_0.1	AI_TP278	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP278_0.3	AI_TP278	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP279_0.1	AI_TP279	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP279_0.3	AI_TP279	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)							6		50				240						10				6		10	300	20
NEPM (1999) HSL A Residential - Asbestos																											
NEPM (1999) HIL C - Recreation							10		70				400						20				10		10	400	30
NEPM (1999) HSL C Recreation - Asbestos																											
NEPM (1999) HIL D - Commercial/Industrial							45		530				3600						100				50		80	2500	160
NEPM (1999) HSL D Comm/Indust - Asbestos																											
NEPM (1999) EIL - Urban Residential & Open Space												180															
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial												640															
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP28_0.5	AI_TP28	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP280_0.1	AI_TP280	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP280_0.3	AI_TP280	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP281_0.1	AI_TP281	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP281_0.3	AI_TP281	29/10/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP29_0.1	AI_TP29	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP29_0.3	AI_TP29	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP30_0.1	AI_TP30	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP30_0.3	AI_TP30	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP31_0.1	AI_TP31	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP31_0.3	AI_TP31	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP32_0.4	AI_TP32	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP35-0.2	AI_TP35	9/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP36_0.4	AI_TP36	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP36-0.3	AI_TP36	9/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP37_0.4	AI_TP37	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP39_0.1	AI_TP39	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP39_0.3	AI_TP39	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP40_0.1	AI_TP40	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP40_0.3	AI_TP40	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP41_0.1	AI_TP41	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP41_0.3	AI_TP41	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP42_0.4	AI_TP42	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP43-0.3	AI_TP43	9/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP45_0.3	AI_TP45	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP46_0.4	AI_TP46	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP47_0.4	AI_TP47	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP48_0.4	AI_TP48	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP49_0.1	AI_TP49	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP49_0.3	AI_TP49	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP50_0.1	AI_TP50	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP50_0.3	AI_TP50	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP51_0.1	AI_TP51	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP51_0.3	AI_TP51	4/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP54-0.3	AI_TP54	9/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP55-0.3	AI_TP55	9/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP56-0.3	AI_TP56	9/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP58_0.4	AI_TP58	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP59_0.4	AI_TP59	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP60_0.5	AI_TP60	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP61_0.4	AI_TP61	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP62_0.4	AI_TP62	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP66_0.4	AI_TP66	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP67_0.4	AI_TP67	17/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP71_0.4	AI_TP71	20/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP75_0.4	AI_TP75	21/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP76_0.4	AI_TP76	21/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP78_0.3	AI_TP78	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP79_0.4	AI_TP79	21/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)						6		50				240					10				6		10	300	20
NEPM (1999) HSL A Residential - Asbestos																											
NEPM (1999) HIL C - Recreation						10		70				400					20				10		10	400	30
NEPM (1999) HSL C Recreation - Asbestos																											
NEPM (1999) HIL D - Commercial/Industrial						45		530				3600					100				50		80	2500	160
NEPM (1999) HSL D Comm/Indust - Asbestos																											
NEPM (1999) EIL - Urban Residential & Open Space											180																
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial											640																
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP80_0.4	AI_TP80	21/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP81_0.4	AI_TP81	21/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP82_0.3	AI_TP82	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP83_0.3	AI_TP83	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP84_0.3	AI_TP84	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP86_0.4	AI_TP86	21/12/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP88_0.3	AI_TP88	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP89_0.3	AI_TP89	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP90_0.3	AI_TP90	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP91_0.3	AI_TP91	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP92_0.5	AI_TP92	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP93_0.3	AI_TP93	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP93_0.1	AI_TP93	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP94_0.3	AI_TP94	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP94_0.1	AI_TP94	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP95_0.3	AI_TP95	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP95_0.1	AI_TP95	8/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP96_0.3	AI_TP96	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP98_0.3	AI_TP98	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
AI_TP99_0.3	AI_TP99	15/11/2021	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
Statistical Summary																											
Number of Results			394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394
Number of Detects			1	1	0	0	0	2	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5
Minimum Detect			1.33	1	ND	ND	ND	0.09	ND	1	ND	ND	ND	ND	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			1.33	1	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
Maximum Detect			1.33	1	ND	ND	ND	0.33	ND	1	ND	ND	ND	ND	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.054	0.054	0.026	0.026	0.026	0.027	0.026	0.054	0.026	0.026	0.026	0.026	0.027	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.26
Median Concentration			0.05	0.05	0.025	0.025	0.025	0.025	0.025	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.25
Standard Deviation			0.068	0.053	0.011	0.011	0.011	0.019	0.011	0.053	0.011	0.011	0.011	0.011	0.019	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.24
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			OPP																																			
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																						
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																						
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																						
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																						
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																						
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																						
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																						
NEPM (1999) Management Limits - Urban residential & open spa																																						
NEPM (1999) HIL A - Residential (garden)							160																															
NEPM (1999) HSL A Residential - Asbestos																																						
NEPM (1999) HIL C - Recreation							250																															
NEPM (1999) HSL C Recreation - Asbestos																																						
NEPM (1999) HIL D - Commercial/Industrial							2000																															
NEPM (1999) HSL D Comm/Indust - Asbestos																																						
NEPM (1999) EIL - Urban Residential & Open Space																																						
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																						
NEPM (1999) EIL - Commercial/Industrial																																						
NEPM (1999) ESL - Commercial/Industrial (fine)																																						
NEPM (1999) HSL B Residential - Asbestos																																						
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
A1_TP128_0.1	A1_TP128	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP128_0.3	A1_TP128	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP129_0.1	A1_TP129	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP129_0.3	A1_TP129	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP130_0.1	A1_TP130	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP130_0.3	A1_TP130	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP131_0.1	A1_TP131	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP131_0.3	A1_TP131	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP153_0.1	A1_TP153	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP153_0.3	A1_TP153	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP159_0.3	A1_TP159	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP256_0.1	A1_TP256	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP256_0.3	A1_TP256	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP257_0.1	A1_TP257	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP257_0.3	A1_TP257	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP258_0.1	A1_TP258	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP258_0.3	A1_TP258	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP259_0.1	A1_TP259	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP259_0.3	A1_TP259	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP260_0.1	A1_TP260	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP260_0.3	A1_TP260	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP262_0.1	A1_TP262	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP262_0.3	A1_TP262	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP303_0.1	A1_TP303	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP303_0.3	A1_TP303	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP305_0.1	A1_TP305	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP305_0.3	A1_TP305	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP315_0.1	A1_TP315	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP315_0.3	A1_TP315	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP36_0.1	A1_TP36	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
A1_TP36_0.3	A1_TP36	16/06/2022	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

			OPP																																		
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																					
NEPM (1999) Management Limits - Urban residential & open spa																																					
NEPM (1999) HIL A - Residential (garden)							160																														
NEPM (1999) HSL A Residential - Asbestos																																					
NEPM (1999) HIL C - Recreation							250																														
NEPM (1999) HSL C Recreation - Asbestos																																					
NEPM (1999) HIL D - Commercial/Industrial							2000																														
NEPM (1999) HSL D Comm/Indust - Asbestos																																					
NEPM (1999) EIL - Urban Residential & Open Space																																					
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																					
NEPM (1999) EIL - Commercial/Industrial																																					
NEPM (1999) ESL - Commercial/Industrial (fine)																																					
NEPM (1999) HSL B Residential - Asbestos																																					
Field_ID	**LocCode**	**Sampled_Date-Time**																																			
AI_TP02-0.3	AI_TP02	9/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP03-0.3	AI_TP03	9/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP05_0.1	AI_TP05	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP05_0.3	AI_TP05	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP06_0	AI_TP06	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP08_0.1	AI_TP08	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP08_0.3	AI_TP08	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP09_0.4	AI_TP09	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP100_0.3	AI_TP100	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP101_0.3	AI_TP101	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP102_0.3	AI_TP102	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP102_0.1	AI_TP102	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP103_0.3	AI_TP103	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP103_0.1	AI_TP103	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP104_0.3	AI_TP104	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP104_0.1	AI_TP104	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP105_0.4	AI_TP105	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP107_0.3	AI_TP107	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP108_0.5	AI_TP108	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP109_0.3	AI_TP109	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP110_0.3	AI_TP110	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP111_0.3	AI_TP111	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP111_0.1	AI_TP111	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP112_0.3	AI_TP112	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP112_0.1	AI_TP112	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP113_0.3	AI_TP113	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP113_0.1	AI_TP113	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP115_0.3	AI_TP115	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP116_0.1	AI_TP116	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP117_0.1	AI_TP117	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP117_0.2	AI_TP117	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP118_0.1	AI_TP118	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP118_0.2	AI_TP118	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP119_0.3	AI_TP119	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP119_0.1	AI_TP119	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP12_0.1	AI_TP12	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP12_0.3	AI_TP12	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP120_0.3	AI_TP120	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP120_0.1	AI_TP120	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP121_0.3	AI_TP121	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP121_0.1	AI_TP121	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP122_0.3	AI_TP122	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP122_0.1	AI_TP122	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP123_0.3	AI_TP123	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP123_0.1	AI_TP123	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP124_0.3	AI_TP124	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP124_0.1	AI_TP124	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP125_0.3	AI_TP125	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP125_0.1	AI_TP125	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

			OPP																																		
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																					
NEPM (1999) Management Limits - Urban residential & open spa																																					
NEPM (1999) HIL A - Residential (garden)							160																														
NEPM (1999) HSL A Residential - Asbestos																																					
NEPM (1999) HIL C - Recreation							250																														
NEPM (1999) HSL C Recreation - Asbestos																																					
NEPM (1999) HIL D - Commercial/Industrial							2000																														
NEPM (1999) HSL D Comm/Indust - Asbestos																																					
NEPM (1999) EIL - Urban Residential & Open Space																																					
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																					
NEPM (1999) EIL - Commercial/Industrial																																					
NEPM (1999) ESL - Commercial/Industrial (fine)																																					
NEPM (1999) HSL B Residential - Asbestos																																					
Field_ID	**LocCode**	**Sampled_Date-Time**																																			
AI_TP126_0.3	AI_TP126	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP126_0.1	AI_TP126	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP127_0.3	AI_TP127	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP127_0.1	AI_TP127	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP13_0.1	AI_TP13	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP13_0.3	AI_TP13	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP132_0.1	AI_TP132	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP132_0.3	AI_TP132	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP133_0.1	AI_TP133	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP133_0.3	AI_TP133	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP134_0.1	AI_TP134	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP134_0.3	AI_TP134	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP135_0.1	AI_TP135	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP135_0.3	AI_TP135	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP136_0.1	AI_TP136	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP136_0.3	AI_TP136	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP137_0.1	AI_TP137	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP137_0.3	AI_TP137	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP138_0.1	AI_TP138	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP138_0.3	AI_TP138	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP139_0.1	AI_TP139	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP139_0.3	AI_TP139	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP14_0.4	AI_TP14	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP140_0.1	AI_TP140	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP140_0.3	AI_TP140	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP141_0.1	AI_TP141	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP141_0.3	AI_TP141	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP142_0.3	AI_TP142	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP142_0.1	AI_TP142	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP143_0.3	AI_TP143	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP143_0.1	AI_TP143	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP144_0.2	AI_TP144	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP144_0.1	AI_TP144	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP144_0.2	AI_TP144	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP145_0.3	AI_TP145	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP145_0.1	AI_TP145	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP146_0.3	AI_TP146	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP146_0.1	AI_TP146	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP147_0.3	AI_TP147	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP147_0.1	AI_TP147	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP148_0.3	AI_TP148	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP148_0.1	AI_TP148	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP149_0.3	AI_TP149	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP149_0.1	AI_TP149	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP15-0.3	AI_TP15	9/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP150_0.1	AI_TP150	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP150_0.3	AI_TP150	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP151_0.1	AI_TP151	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP151_0.3	AI_TP151	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

			OPP																																		
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																					
NEPM (1999) Management Limits - Urban residential & open spa																																					
NEPM (1999) HIL A - Residential (garden)							160																														
NEPM (1999) HSL A Residential - Asbestos																																					
NEPM (1999) HIL C - Recreation							250																														
NEPM (1999) HSL C Recreation - Asbestos																																					
NEPM (1999) HIL D - Commercial/Industrial							2000																														
NEPM (1999) HSL D Comm/Indust - Asbestos																																					
NEPM (1999) EIL - Urban Residential & Open Space																																					
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																					
NEPM (1999) EIL - Commercial/Industrial																																					
NEPM (1999) ESL - Commercial/Industrial (fine)																																					
NEPM (1999) HSL B Residential - Asbestos																																					
Field_ID	**LocCode**	**Sampled_Date-Time**																																			
AI_TP152_0.1	AI_TP152	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP152_0.3	AI_TP152	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP158_0.1	AI_TP158	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP158_0.3	AI_TP158	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP16_0.3	AI_TP16	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP160_0.3	AI_TP160	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP163_0.1	AI_TP163	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP163_0.3	AI_TP163	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP164_0.1	AI_TP164	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP164_0.4	AI_TP164	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP165_0.1	AI_TP165	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP165_0.3	AI_TP165	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP166_0.1	AI_TP166	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP166_0.3	AI_TP166	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP167_0.1	AI_TP167	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP167_0.3	AI_TP167	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP168_0.1	AI_TP168	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP168_0.3	AI_TP168	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP169_0.1	AI_TP169	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP169_0.3	AI_TP169	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP170_0.1	AI_TP170	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP170_0.3	AI_TP170	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP171_0.1	AI_TP171	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP171_0.3	AI_TP171	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP172_0.1	AI_TP172	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP172_0.3	AI_TP172	27/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP173_0.4	AI_TP173	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP176_0.1	AI_TP176	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP176_0.3	AI_TP176	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP177_0.4	AI_TP177	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP178_0.4	AI_TP178	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP179_0.4	AI_TP179	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP181_0.1	AI_TP181	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP181_0.3	AI_TP181	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP182_0.1	AI_TP182	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP182_0.3	AI_TP182	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP183_0.1	AI_TP183	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP183_0.3	AI_TP183	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP184_0.4	AI_TP184	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP186_0.1	AI_TP186	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP186_0.3	AI_TP186	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP187_0.1	AI_TP187	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP187_0.3	AI_TP187	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP188_0.1	AI_TP188	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP188_0.3	AI_TP188	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP189_0.1	AI_TP189	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP189_0.3	AI_TP189	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP19_0.3	AI_TP19	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP193_0.1	AI_TP193	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

			OPP																																		
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																					
NEPM (1999) Management Limits - Urban residential & open spa																																					
NEPM (1999) HIL A - Residential (garden)							160																														
NEPM (1999) HSL A Residential - Asbestos																																					
NEPM (1999) HIL C - Recreation							250																														
NEPM (1999) HSL C Recreation - Asbestos																																					
NEPM (1999) HIL D - Commercial/Industrial							2000																														
NEPM (1999) HSL D Comm/Indust - Asbestos																																					
NEPM (1999) EIL - Urban Residential & Open Space																																					
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																					
NEPM (1999) EIL - Commercial/Industrial																																					
NEPM (1999) ESL - Commercial/Industrial (fine)																																					
NEPM (1999) HSL B Residential - Asbestos																																					
Field_ID	**LocCode**	**Sampled_Date-Time**																																			
AI_TP193_0.3	AI_TP193	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP194_0.1	AI_TP194	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP194_0.3	AI_TP194	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP195_0.1	AI_TP195	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP195_0.3	AI_TP195	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP196_0.1	AI_TP196	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP196_0.3	AI_TP196	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP197_0.4	AI_TP197	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP20_0.4	AI_TP20	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP200_0.1	AI_TP200	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP200_0.3	AI_TP200	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP201_0.1	AI_TP201	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP201_0.3	AI_TP201	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP202_0.1	AI_TP202	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP202_0.3	AI_TP202	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP203_0.1	AI_TP203	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP203_0.3	AI_TP203	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP204_0.1	AI_TP204	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP204_0.3	AI_TP204	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP205_0.1	AI_TP205	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP205_0.3	AI_TP205	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP208_0.1	AI_TP208	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP208_0.3	AI_TP208	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP209_0.1	AI_TP209	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP209_0.3	AI_TP209	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP21_0.1	AI_TP21	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP21_0.3	AI_TP21	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP210_0.1	AI_TP210	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP210_0.3	AI_TP210	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP211_0.1	AI_TP211	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP211_0.3	AI_TP211	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP212_0.1	AI_TP212	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP212_0.3	AI_TP212	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP213_0.1	AI_TP213	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP213_0.3	AI_TP213	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP214_0.1	AI_TP214	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP214_0.3	AI_TP214	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP215_0.1	AI_TP215	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP215_0.3	AI_TP215	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP216_0.4	AI_TP216	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP217_0.1	AI_TP217	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP217_0.3	AI_TP217	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP218_0.1	AI_TP218	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP218_0.3	AI_TP218	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP219_0.1	AI_TP219	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP219_0.3	AI_TP219	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP22_0.1	AI_TP22	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP22_0.3	AI_TP22	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP220_0.1	AI_TP220	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

			OPP																																		
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																					
NEPM (1999) Management Limits - Urban residential & open spa																																					
NEPM (1999) HIL A - Residential (garden)							160																														
NEPM (1999) HSL A Residential - Asbestos																																					
NEPM (1999) HIL C - Recreation							250																														
NEPM (1999) HSL C Recreation - Asbestos																																					
NEPM (1999) HIL D - Commercial/Industrial							2000																														
NEPM (1999) HSL D Comm/Indust - Asbestos																																					
NEPM (1999) EIL - Urban Residential & Open Space																																					
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																					
NEPM (1999) EIL - Commercial/Industrial																																					
NEPM (1999) ESL - Commercial/Industrial (fine)																																					
NEPM (1999) HSL B Residential - Asbestos																																					
Field_ID	**LocCode**	**Sampled_Date-Time**																																			
AI_TP220_0.3	AI_TP220	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP221_0.1	AI_TP221	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP221_0.3	AI_TP221	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP222_0.1	AI_TP222	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP222_0.3	AI_TP222	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP223_0.1	AI_TP223	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP223_0.3	AI_TP223	2/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP224_0.1	AI_TP224	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP224_0.3	AI_TP224	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP225_0.4	AI_TP225	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP226_0.1	AI_TP226	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP226_0.3	AI_TP226	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP227_0.1	AI_TP227	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP227_0.3	AI_TP227	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP228_0.1	AI_TP228	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP228_0.3	AI_TP228	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP229_0.1	AI_TP229	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP229_0.3	AI_TP229	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP23_0.4	AI_TP23	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP230_0.1	AI_TP230	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP230_0.3	AI_TP230	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP231_0.1	AI_TP231	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP231_0.3	AI_TP231	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP232_0.1	AI_TP232	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP232_0.3	AI_TP232	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP233_0.1	AI_TP233	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP233_0.3	AI_TP233	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP234_0.1	AI_TP234	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP234_0.3	AI_TP234	3/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP235_0.1	AI_TP235	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP235_0.3	AI_TP235	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP236_0.1	AI_TP236	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP236_0.3	AI_TP236	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP237_0.1	AI_TP237	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP237_0.3	AI_TP237	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP238_0.1	AI_TP238	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP238_0.3	AI_TP238	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP239_0.1	AI_TP239	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP239_0.3	AI_TP239	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP24_0.3	AI_TP24	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP240_0.1	AI_TP240	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP240_0.3	AI_TP240	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP242_0.1	AI_TP242	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP242_0.3	AI_TP242	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP243_0.1	AI_TP243	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP243_0.3	AI_TP243	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP244_0.1	AI_TP244	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP244_0.3	AI_TP244	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP245_0.1	AI_TP245	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

			OPP																																		
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																					
NEPM (1999) Management Limits - Urban residential & open spa																																					
NEPM (1999) HIL A - Residential (garden)							160																														
NEPM (1999) HSL A Residential - Asbestos																																					
NEPM (1999) HIL C - Recreation							250																														
NEPM (1999) HSL C Recreation - Asbestos																																					
NEPM (1999) HIL D - Commercial/Industrial							2000																														
NEPM (1999) HSL D Comm/Indust - Asbestos																																					
NEPM (1999) EIL - Urban Residential & Open Space																																					
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																					
NEPM (1999) EIL - Commercial/Industrial																																					
NEPM (1999) ESL - Commercial/Industrial (fine)																																					
NEPM (1999) HSL B Residential - Asbestos																																					
Field_ID	**LocCode**	**Sampled_Date-Time**																																			
AI_TP245_0.3	AI_TP245	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP246_0.1	AI_TP246	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP246_0.3	AI_TP246	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP247_0.1	AI_TP247	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP247_0.3	AI_TP247	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP248_0.1	AI_TP248	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP248_0.3	AI_TP248	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP249_0.1	AI_TP249	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP249_0.3	AI_TP249	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP25_0.3	AI_TP25	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP250_0.1	AI_TP250	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP250_0.3	AI_TP250	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP251_0.1	AI_TP251	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP251_0.3	AI_TP251	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP252_0.1	AI_TP252	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP252_0.3	AI_TP252	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP253_0.1	AI_TP253	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP253_0.3	AI_TP253	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP254_0.1	AI_TP254	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP254_0.3	AI_TP254	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP255_0.1	AI_TP255	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP255_0.3	AI_TP255	1/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP263_0.1	AI_TP263	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP263_0.3	AI_TP263	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP264_0.1	AI_TP264	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP264_0.3	AI_TP264	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP265_0.1	AI_TP265	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP265_0.3	AI_TP265	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP266_0.1	AI_TP266	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP266_0.3	AI_TP266	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP267_0.1	AI_TP267	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP267_0.3	AI_TP267	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP268_0.1	AI_TP268	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP268_0.3	AI_TP268	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP269_0.1	AI_TP269	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP269_0.3	AI_TP269	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP27_0.4	AI_TP27	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP270_0.1	AI_TP270	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP270_0.3	AI_TP270	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP271_0.1	AI_TP271	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP271_0.3	AI_TP271	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP272_0.1	AI_TP272	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP272_0.3	AI_TP272	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP277_0.1	AI_TP277	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP277_0.3	AI_TP277	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP278_0.1	AI_TP278	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP278_0.3	AI_TP278	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP279_0.1	AI_TP279	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP279_0.3	AI_TP279	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

			OPP																																		
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																					
NEPM (1999) Management Limits - Urban residential & open spa																																					
NEPM (1999) HIL A - Residential (garden)							160																														
NEPM (1999) HSL A Residential - Asbestos																																					
NEPM (1999) HIL C - Recreation							250																														
NEPM (1999) HSL C Recreation - Asbestos																																					
NEPM (1999) HIL D - Commercial/Industrial							2000																														
NEPM (1999) HSL D Comm/Indust - Asbestos																																					
NEPM (1999) EIL - Urban Residential & Open Space																																					
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																					
NEPM (1999) EIL - Commercial/Industrial																																					
NEPM (1999) ESL - Commercial/Industrial (fine)																																					
NEPM (1999) HSL B Residential - Asbestos																																					
Field_ID	**LocCode**	**Sampled_Date-Time**																																			
AI_TP28_0.5	AI_TP28	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP280_0.1	AI_TP280	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP280_0.3	AI_TP280	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP281_0.1	AI_TP281	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP281_0.3	AI_TP281	29/10/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP29_0.1	AI_TP29	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP29_0.3	AI_TP29	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP30_0.1	AI_TP30	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP30_0.3	AI_TP30	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP31_0.1	AI_TP31	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP31_0.3	AI_TP31	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP32_0.4	AI_TP32	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP35-0.2	AI_TP35	9/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP36_0.4	AI_TP36	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP36-0.3	AI_TP36	9/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP37_0.4	AI_TP37	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP39_0.1	AI_TP39	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP39_0.3	AI_TP39	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP40_0.1	AI_TP40	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP40_0.3	AI_TP40	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP41_0.1	AI_TP41	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP41_0.3	AI_TP41	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP42_0.4	AI_TP42	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP43-0.3	AI_TP43	9/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP45_0.3	AI_TP45	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP46_0.4	AI_TP46	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP47_0.4	AI_TP47	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP48_0.4	AI_TP48	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP49_0.1	AI_TP49	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP49_0.3	AI_TP49	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP50_0.1	AI_TP50	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP50_0.3	AI_TP50	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP51_0.1	AI_TP51	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP51_0.3	AI_TP51	4/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP54-0.3	AI_TP54	9/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP55-0.3	AI_TP55	9/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP56-0.3	AI_TP56	9/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP58_0.4	AI_TP58	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP59_0.4	AI_TP59	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP60_0.5	AI_TP60	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP61_0.4	AI_TP61	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP62_0.4	AI_TP62	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP66_0.4	AI_TP66	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP67_0.4	AI_TP67	17/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP71_0.4	AI_TP71	20/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP75_0.4	AI_TP75	21/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP76_0.4	AI_TP76	21/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP78_0.3	AI_TP78	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP79_0.4	AI_TP79	21/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

			OPP																																		
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																					
NEPM (1999) Management Limits - Urban residential & open spa																																					
NEPM (1999) HIL A - Residential (garden)							160																														
NEPM (1999) HSL A Residential - Asbestos																																					
NEPM (1999) HIL C - Recreation							250																														
NEPM (1999) HSL C Recreation - Asbestos																																					
NEPM (1999) HIL D - Commercial/Industrial							2000																														
NEPM (1999) HSL D Comm/Indust - Asbestos																																					
NEPM (1999) EIL - Urban Residential & Open Space																																					
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																					
NEPM (1999) EIL - Commercial/Industrial																																					
NEPM (1999) ESL - Commercial/Industrial (fine)																																					
NEPM (1999) HSL B Residential - Asbestos																																					
Field_ID	**LocCode**	**Sampled_Date-Time**																																			
AI_TP80_0.4	AI_TP80	21/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP81_0.4	AI_TP81	21/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP82_0.3	AI_TP82	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP83_0.3	AI_TP83	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP84_0.3	AI_TP84	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP86_0.4	AI_TP86	21/12/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP88_0.3	AI_TP88	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP89_0.3	AI_TP89	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP90_0.3	AI_TP90	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP91_0.3	AI_TP91	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP92_0.5	AI_TP92	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP93_0.3	AI_TP93	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP93_0.1	AI_TP93	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP94_0.3	AI_TP94	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP94_0.1	AI_TP94	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP95_0.3	AI_TP95	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP95_0.1	AI_TP95	8/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP96_0.3	AI_TP96	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP98_0.3	AI_TP98	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AI_TP99_0.3	AI_TP99	15/11/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Statistical Summary																																					
Number of Results			394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Median Concentration			0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Standard Deviation			0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.076	0.0076	0.076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WPCA,Aerotropolis

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																			
NEPM (1999) Management Limits - Urban residential & open space (fine)																																			
NEPM (1999) HIL A - Residential (garden)																																			
NEPM (1999) HSL A Residential - Asbestos																																			
NEPM (1999) HIL C - Recreation																																			
NEPM (1999) HSL C Recreation - Asbestos																																			
NEPM (1999) HIL D - Commercial/Industrial																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																			
NEPM (1999) EIL - Urban Residential & Open Space																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																									0.7										
NEPM (1999) EIL - Commercial/Industrial																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																									0.7										
NEPM (1999) HSL B Residential - Asbestos																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																	
A1_TP128_0.1	A1_TP128	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP128_0.3	A1_TP128	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP129_0.1	A1_TP129	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP129_0.3	A1_TP129	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP130_0.1	A1_TP130	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP130_0.3	A1_TP130	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP131_0.1	A1_TP131	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP131_0.3	A1_TP131	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP153_0.1	A1_TP153	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP153_0.3	A1_TP153	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP159_0.3	A1_TP159	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP256_0.1	A1_TP256	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP256_0.3	A1_TP256	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP257_0.1	A1_TP257	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP257_0.3	A1_TP257	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP258_0.1	A1_TP258	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP258_0.3	A1_TP258	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP259_0.1	A1_TP259	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP259_0.3	A1_TP259	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP260_0.1	A1_TP260	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP260_0.3	A1_TP260	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP262_0.1	A1_TP262	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP262_0.3	A1_TP262	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP303_0.1	A1_TP303	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP303_0.3	A1_TP303	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																			
NEPM (1999) Management Limits - Urban residential & open space (fine)																																			
NEPM (1999) HIL A - Residential (garden)																																			
NEPM (1999) HSL A Residential - Asbestos																																			
NEPM (1999) HIL C - Recreation																																			
NEPM (1999) HSL C Recreation - Asbestos																																			
NEPM (1999) HIL D - Commercial/Industrial																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																			
NEPM (1999) EIL - Urban Residential & Open Space																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																									0.7										
NEPM (1999) EIL - Commercial/Industrial																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																									0.7										
NEPM (1999) HSL B Residential - Asbestos																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																	
A1_TP305_0.1	A1_TP305	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP305_0.3	A1_TP305	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP315_0.1	A1_TP315	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP315_0.3	A1_TP315	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP36_0.1	A1_TP36	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
A1_TP36_0.3	A1_TP36	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP02-0.1	AI_TP02	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP02-0.3	AI_TP02	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP03-0.1	AI_TP03	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP03-0.3	AI_TP03	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP05_0.1	AI_TP05	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP05_0.3	AI_TP05	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP06_0.3	AI_TP06	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP06_0.1	AI_TP06	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP08_0.1	AI_TP08	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP08_0.3	AI_TP08	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP09_0.1	AI_TP09	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP09_0.4	AI_TP09	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP100_0.1	AI_TP100	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP100_0.3	AI_TP100	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP101_0.1	AI_TP101	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP101_0.3	AI_TP101	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP102_0.3	AI_TP102	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP102_0.1	AI_TP102	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP103_0.3	AI_TP103	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP103_0.1	AI_TP103	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP104_0.3	AI_TP104	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP104_0.1	AI_TP104	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP105_0.1	AI_TP105	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP105_0.4	AI_TP105	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP107_0.1	AI_TP107	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP107_0.3	AI_TP107	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP108_0.1	AI_TP108	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP108_0.5	AI_TP108	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP109_0.1	AI_TP109	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP109_0.3	AI_TP109	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP11-0.1	AI_TP11	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP110_0.1	AI_TP110	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP110_0.3	AI_TP110	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP111_0.3	AI_TP111	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP111_0.1	AI_TP111	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP112_0.3	AI_TP112	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP112_0.1	AI_TP112	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP113_0.3	AI_TP113	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP113_0.1	AI_TP113	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																			
NEPM (1999) Management Limits - Urban residential & open space (fine)																																			
NEPM (1999) HIL A - Residential (garden)																																			
NEPM (1999) HSL A Residential - Asbestos																																			
NEPM (1999) HIL C - Recreation																																			
NEPM (1999) HSL C Recreation - Asbestos																																			
NEPM (1999) HIL D - Commercial/Industrial																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																			
NEPM (1999) EIL - Urban Residential & Open Space																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																									0.7										
NEPM (1999) EIL - Commercial/Industrial																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																									0.7										
NEPM (1999) HSL B Residential - Asbestos																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																	
AI_TP115_0.1	AI_TP115	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP115_0.3	AI_TP115	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP116_0.1	AI_TP116	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP117_0.1	AI_TP117	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP117_0.2	AI_TP117	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP118_0.1	AI_TP118	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP118_0.2	AI_TP118	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP119_0.3	AI_TP119	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP119_0.1	AI_TP119	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP12_0.1	AI_TP12	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP12_0.3	AI_TP12	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP120_0.3	AI_TP120	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP120_0.1	AI_TP120	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP121_0.3	AI_TP121	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP121_0.1	AI_TP121	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP122_0.3	AI_TP122	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP122_0.1	AI_TP122	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP123_0.3	AI_TP123	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP123_0.1	AI_TP123	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP124_0.3	AI_TP124	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP124_0.1	AI_TP124	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP125_0.3	AI_TP125	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP125_0.1	AI_TP125	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP126_0.3	AI_TP126	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP126_0.1	AI_TP126	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP127_0.3	AI_TP127	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP127_0.1	AI_TP127	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP13_0.1	AI_TP13	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP13_0.3	AI_TP13	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP132_0.1	AI_TP132	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP132_0.3	AI_TP132	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP133_0.1	AI_TP133	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP133_0.3	AI_TP133	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP134_0.1	AI_TP134	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP134_0.3	AI_TP134	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP135_0.1	AI_TP135	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP135_0.3	AI_TP135	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP136_0.1	AI_TP136	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP136_0.3	AI_TP136	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP137_0.1	AI_TP137	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP137_0.3	AI_TP137	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																			
NEPM (1999) Management Limits - Urban residential & open space (fine)																																			
NEPM (1999) HIL A - Residential (garden)																																			
NEPM (1999) HSL A Residential - Asbestos																																			
NEPM (1999) HIL C - Recreation																																			
NEPM (1999) HSL C Recreation - Asbestos																																			
NEPM (1999) HIL D - Commercial/Industrial																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																			
NEPM (1999) EIL - Urban Residential & Open Space																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																									0.7										
NEPM (1999) EIL - Commercial/Industrial																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																									0.7										
NEPM (1999) HSL B Residential - Asbestos																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																	
AI_TP138_0.1	AI_TP138	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP138_0.3	AI_TP138	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP139_0.1	AI_TP139	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP139_0.3	AI_TP139	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP14_0.1	AI_TP14	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP14_0.4	AI_TP14	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP140_0.1	AI_TP140	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP140_0.3	AI_TP140	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP141_0.1	AI_TP141	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP141_0.3	AI_TP141	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP142_0.3	AI_TP142	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP142_0.1	AI_TP142	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP143_0.3	AI_TP143	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP143_0.1	AI_TP143	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP144_0.1	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP145_0.3	AI_TP145	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP145_0.1	AI_TP145	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP146_0.3	AI_TP146	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP146_0.1	AI_TP146	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP147_0.3	AI_TP147	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP147_0.1	AI_TP147	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP148_0.3	AI_TP148	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP148_0.1	AI_TP148	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP149_0.3	AI_TP149	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP149_0.1	AI_TP149	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP15-0.1	AI_TP15	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP15-0.3	AI_TP15	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP150_0.1	AI_TP150	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP150_0.3	AI_TP150	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP151_0.1	AI_TP151	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP151_0.3	AI_TP151	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP152_0.1	AI_TP152	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP152_0.3	AI_TP152	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP158_0.1	AI_TP158	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP158_0.3	AI_TP158	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP16_0.1	AI_TP16	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP16_0.3	AI_TP16	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP160_0.3	AI_TP160	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP163_0.1	AI_TP163	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP163_0.3	AI_TP163	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP164_0.1	AI_TP164	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP164_0.4	AI_TP164	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP165_0.1	AI_TP165	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP165_0.3	AI_TP165	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP166_0.1	AI_TP166	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP166_0.3	AI_TP166	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5

WPCA,Aerotropolis

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																			
NEPM (1999) Management Limits - Urban residential & open space (fine)																																			
NEPM (1999) HIL A - Residential (garden)																																			
NEPM (1999) HSL A Residential - Asbestos																																			
NEPM (1999) HIL C - Recreation																																			
NEPM (1999) HSL C Recreation - Asbestos																																			
NEPM (1999) HIL D - Commercial/Industrial																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																			
NEPM (1999) EIL - Urban Residential & Open Space																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																									0.7										
NEPM (1999) EIL - Commercial/Industrial																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																									0.7										
NEPM (1999) HSL B Residential - Asbestos																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																	
AI_TP167_0.1	AI_TP167	27/10/2021	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<5	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	<1
AI_TP167_0.3	AI_TP167	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP168_0.1	AI_TP168	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP168_0.3	AI_TP168	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP169_0.1	AI_TP169	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP169_0.3	AI_TP169	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP170_0.1	AI_TP170	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP170_0.3	AI_TP170	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP171_0.1	AI_TP171	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP171_0.3	AI_TP171	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP172_0.1	AI_TP172	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP172_0.3	AI_TP172	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP173_0.1	AI_TP173	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP173_0.4	AI_TP173	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP176_0.1	AI_TP176	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP176_0.3	AI_TP176	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP177_0.1	AI_TP177	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP177_0.4	AI_TP177	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP178_0.1	AI_TP178	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP178_0.4	AI_TP178	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP179_0.1	AI_TP179	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP179_0.4	AI_TP179	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP18_0.2	AI_TP18	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP181_0.1	AI_TP181	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP181_0.3	AI_TP181	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP182_0.1	AI_TP182	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP182_0.3	AI_TP182	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP183_0.1	AI_TP183	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP183_0.3	AI_TP183	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP184_0.1	AI_TP184	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP184_0.4	AI_TP184	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP186_0.1	AI_TP186	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<1	-	-	<0.5	<0.5
AI_TP186_0.3	AI_TP186	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5
AI_TP187_0.1	AI_TP187	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	<0.5	<0.5	-	-	<0.5	-	<1	-	<0.5	<0.5	<0.5
AI_TP187_0.3	AI_TP187	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<1	-	-	<0.5	<0.5
AI_TP188_0.1	AI_TP188	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5
AI_TP188_0.3	AI_TP188	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP189_0.1	AI_TP189	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP189_0.3	AI_TP189	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP19_0.1	AI_TP19	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP19_0.3	AI_TP19	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP193_0.1	AI_TP193	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP193_0.3	AI_TP193	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP194_0.1	AI_TP194	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP194_0.3	AI_TP194	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP195_0.1	AI_TP195	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP195_0.3	AI_TP195	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP196_0.1	AI_TP196	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP196_0.3	AI_TP196	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP197_0.1	AI_TP197	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP197_0.4	AI_TP197	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP20_0.1	AI_TP20	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP20_0.4	AI_TP20	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP200_0.1	AI_TP200	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP200_0.3	AI_TP200	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP201_0.1	AI_TP201	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																			
NEPM (1999) Management Limits - Urban residential & open space (fine)																																			
NEPM (1999) HIL A - Residential (garden)																																			
NEPM (1999) HSL A Residential - Asbestos																																			
NEPM (1999) HIL C - Recreation																																			
NEPM (1999) HSL C Recreation - Asbestos																																			
NEPM (1999) HIL D - Commercial/Industrial																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																			
NEPM (1999) EIL - Urban Residential & Open Space																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																									0.7										
NEPM (1999) EIL - Commercial/Industrial																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																									0.7										
NEPM (1999) HSL B Residential - Asbestos																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																	
AI_TP201_0.3	AI_TP201	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP202_0.1	AI_TP202	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP202_0.3	AI_TP202	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP203_0.1	AI_TP203	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP203_0.3	AI_TP203	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP204_0.1	AI_TP204	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP204_0.3	AI_TP204	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP205_0.1	AI_TP205	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	<0.5	<0.5	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP205_0.3	AI_TP205	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<1	-	-	<0.5	<0.5
AI_TP205_0.3	AI_TP205	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5
AI_TP208_0.1	AI_TP208	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP208_0.3	AI_TP208	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP209_0.1	AI_TP209	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP209_0.3	AI_TP209	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP21_0.1	AI_TP21	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP21_0.3	AI_TP21	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP210_0.1	AI_TP210	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP210_0.3	AI_TP210	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP211_0.1	AI_TP211	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP211_0.3	AI_TP211	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP212_0.1	AI_TP212	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP212_0.3	AI_TP212	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP213_0.1	AI_TP213	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP213_0.3	AI_TP213	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP214_0.1	AI_TP214	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP214_0.3	AI_TP214	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP215_0.1	AI_TP215	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5
AI_TP215_0.3	AI_TP215	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	-	-	-	-	<0.5	<0.5	<0.5	<1	-	-	<0.5	<0.5
AI_TP216_0.1	AI_TP216	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP216_0.4	AI_TP216	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP217_0.1	AI_TP217	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP217_0.3	AI_TP217	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP218_0.1	AI_TP218	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP218_0.3	AI_TP218	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP219_0.1	AI_TP219	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP219_0.3	AI_TP219	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP22_0.1	AI_TP22	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP22_0.3	AI_TP22	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP220_0.1	AI_TP220	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP220_0.3	AI_TP220	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP221_0.1	AI_TP221	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP221_0.3	AI_TP221	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP222_0.1	AI_TP222	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP222_0.3	AI_TP222	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP223_0.1	AI_TP223	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP223_0.3	AI_TP223	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																			
NEPM (1999) Management Limits - Urban residential & open space (fine)																																			
NEPM (1999) HIL A - Residential (garden)																																			
NEPM (1999) HSL A Residential - Asbestos																																			
NEPM (1999) HIL C - Recreation																																			
NEPM (1999) HSL C Recreation - Asbestos																																			
NEPM (1999) HIL D - Commercial/Industrial																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																			
NEPM (1999) EIL - Urban Residential & Open Space																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																									0.7										
NEPM (1999) EIL - Commercial/Industrial																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																									0.7										
NEPM (1999) HSL B Residential - Asbestos																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																	
AI_TP224_0.1	AI_TP224	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<1	<0.5	-	<0.5	<0.5
AI_TP224_0.3	AI_TP224	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	-	<0.5	-	<1	-	<0.5	<0.5	<0.5
AI_TP225_0.1	AI_TP225	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP225_0.4	AI_TP225	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP226_0.1	AI_TP226	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	<0.5	<0.5	<0.5
AI_TP226_0.3	AI_TP226	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	-	<0.5	<1	<0.5	<1	-	-	<0.5	<0.5
AI_TP227_0.1	AI_TP227	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	-	-	<1	-	<1	<0.5	-	<0.5	<0.5
AI_TP227_0.3	AI_TP227	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	<0.5	-	-	-	<0.5	<0.5	<1	<0.5	<1	-	-	<0.5	<0.5
AI_TP228_0.1	AI_TP228	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	-	<1	<0.5	<1	-	-	<0.5	<0.5
AI_TP228_0.3	AI_TP228	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<1	<0.5	<1	-	-	<0.5	<0.5
AI_TP229_0.1	AI_TP229	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<1	<0.5	<1	-	-	<0.5	<0.5
AI_TP229_0.3	AI_TP229	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	<0.5	-	<0.5	-	-	<0.5	<1	-	<1	-	-	<0.5	<0.5
AI_TP23_0.1	AI_TP23	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP23_0.4	AI_TP23	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP230_0.1	AI_TP230	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	<0.5	-	-	-	<0.5	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP230_0.3	AI_TP230	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	<0.5	-	<1	-	<1	-	<0.5	<0.5	<0.5
AI_TP231_0.1	AI_TP231	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	-	-	<1	-	<1	<0.5	-	<0.5	<0.5
AI_TP231_0.3	AI_TP231	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<1	-	<1	<0.5	-	<0.5	<0.5
AI_TP232_0.1	AI_TP232	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	-	<0.5	<0.5
AI_TP232_0.3	AI_TP232	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	<0.5	<1	-	-	<0.5	<0.5
AI_TP233_0.1	AI_TP233	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<1	<0.5	<1	-	-	<0.5	<0.5
AI_TP233_0.3	AI_TP233	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	-	<0.5	-	-	<0.5	-	<1	-	<1	<0.5	-	<0.5	<0.5
AI_TP234_0.1	AI_TP234	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	<0.5	<0.5
AI_TP234_0.3	AI_TP234	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	<1	<0.5	<1	-	<0.5	<0.5	<0.5
AI_TP235_0.1	AI_TP235	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP235_0.3	AI_TP235	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP236_0.1	AI_TP236	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP236_0.3	AI_TP236	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP237_0.1	AI_TP237	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP237_0.3	AI_TP237	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP238_0.1	AI_TP238	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP238_0.3	AI_TP238	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP239_0.1	AI_TP239	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP239_0.3	AI_TP239	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP24_0.1	AI_TP24	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP24_0.3	AI_TP24	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP240_0.1	AI_TP240	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP240_0.3	AI_TP240	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP242_0.1	AI_TP242	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP242_0.3	AI_TP242	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP243_0.1	AI_TP243	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP243_0.3	AI_TP243	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP244_0.1	AI_TP244	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP244_0.3	AI_TP244	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP245_0.1	AI_TP245	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP245_0.3	AI_TP245	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP246_0.1	AI_TP246	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP246_0.3	AI_TP246	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP247_0.1	AI_TP247	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP247_0.3	AI_TP247	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP248_0.1	AI_TP248	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnapthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																			
NEPM (1999) Management Limits - Urban residential & open space (fine)																																			
NEPM (1999) HIL A - Residential (garden)																																			
NEPM (1999) HSL A Residential - Asbestos																																			
NEPM (1999) HIL C - Recreation																																			
NEPM (1999) HSL C Recreation - Asbestos																																			
NEPM (1999) HIL D - Commercial/Industrial																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																			
NEPM (1999) EIL - Urban Residential & Open Space																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																									0.7										
NEPM (1999) EIL - Commercial/Industrial																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																									0.7										
NEPM (1999) HSL B Residential - Asbestos																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																	
AI_TP248_0.3	AI_TP248	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP249_0.1	AI_TP249	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP249_0.3	AI_TP249	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP25_0.1	AI_TP25	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP25_0.3	AI_TP25	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP250_0.1	AI_TP250	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP250_0.3	AI_TP250	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP251_0.1	AI_TP251	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP251_0.3	AI_TP251	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP252_0.1	AI_TP252	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP252_0.3	AI_TP252	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP253_0.1	AI_TP253	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP253_0.3	AI_TP253	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP254_0.1	AI_TP254	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP254_0.3	AI_TP254	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP255_0.1	AI_TP255	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP255_0.3	AI_TP255	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP263_0.1	AI_TP263	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP263_0.3	AI_TP263	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP264_0.1	AI_TP264	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP264_0.3	AI_TP264	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP265_0.1	AI_TP265	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP265_0.3	AI_TP265	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP266_0.1	AI_TP266	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP266_0.3	AI_TP266	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP267_0.1	AI_TP267	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP267_0.3	AI_TP267	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP268_0.1	AI_TP268	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP268_0.3	AI_TP268	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP269_0.1	AI_TP269	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP269_0.3	AI_TP269	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP27_0.1	AI_TP27	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP27_0.4	AI_TP27	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP270_0.1	AI_TP270	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP270_0.3	AI_TP270	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP271_0.1	AI_TP271	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP271_0.3	AI_TP271	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP272_0.1	AI_TP272	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP272_0.3	AI_TP272	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP277_0.1	AI_TP277	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP277_0.3	AI_TP277	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP278_0.1	AI_TP278	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP278_0.3	AI_TP278	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP279_0.1	AI_TP279	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP279_0.3	AI_TP279	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																			
NEPM (1999) Management Limits - Urban residential & open space (fine)																																			
NEPM (1999) HIL A - Residential (garden)																																			
NEPM (1999) HSL A Residential - Asbestos																																			
NEPM (1999) HIL C - Recreation																																			
NEPM (1999) HSL C Recreation - Asbestos																																			
NEPM (1999) HIL D - Commercial/Industrial																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																			
NEPM (1999) EIL - Urban Residential & Open Space																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																									0.7										
NEPM (1999) EIL - Commercial/Industrial																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																									0.7										
NEPM (1999) HSL B Residential - Asbestos																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																	
AI_TP28_0.1	AI_TP28	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP28_0.5	AI_TP28	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP280_0.1	AI_TP280	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP280_0.3	AI_TP280	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP281_0.1	AI_TP281	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP281_0.3	AI_TP281	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP29_0.1	AI_TP29	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP29_0.3	AI_TP29	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP30_0.1	AI_TP30	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP30_0.3	AI_TP30	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP31_0.1	AI_TP31	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP31_0.3	AI_TP31	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP32_0.1	AI_TP32	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP32_0.4	AI_TP32	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP33-0.1	AI_TP33	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP34-0.1	AI_TP34	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP35-0.1	AI_TP35	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP35-0.2	AI_TP35	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP36_0.1	AI_TP36	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP36_0.4	AI_TP36	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP36-0.1	AI_TP36	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP36-0.3	AI_TP36	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP37_0.1	AI_TP37	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP37_0.4	AI_TP37	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP39_0.1	AI_TP39	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP39_0.3	AI_TP39	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP40_0.1	AI_TP40	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP40_0.3	AI_TP40	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP41_0.1	AI_TP41	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP41_0.3	AI_TP41	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP42_0.1	AI_TP42	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP42_0.4	AI_TP42	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP43-0.1	AI_TP43	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP43-0.3	AI_TP43	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP45_0.1	AI_TP45	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP45_0.3	AI_TP45	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP46_0.1	AI_TP46	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP46_0.4	AI_TP46	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP47_0.1	AI_TP47	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP47_0.4	AI_TP47	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP48_0.1	AI_TP48	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP48_0.4	AI_TP48	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP49_0.1	AI_TP49	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP49_0.3	AI_TP49	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP50_0.1	AI_TP50	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP50_0.3	AI_TP50	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP51_0.1	AI_TP51	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP51_0.3	AI_TP51	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP54-0.1	AI_TP54	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP54-0.3	AI_TP54	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP55-0.1	AI_TP55	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP55-0.3	AI_TP55	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP56-0.1	AI_TP56	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP56-0.3	AI_TP56	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP58_0.1	AI_TP58	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP58_0.4	AI_TP58	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5

WPCA,Aerotropolis

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																			
NEPM (1999) Management Limits - Urban residential & open space (fine)																																			
NEPM (1999) HIL A - Residential (garden)																																			
NEPM (1999) HSL A Residential - Asbestos																																			
NEPM (1999) HIL C - Recreation																																			
NEPM (1999) HSL C Recreation - Asbestos																																			
NEPM (1999) HIL D - Commercial/Industrial																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																			
NEPM (1999) EIL - Urban Residential & Open Space																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																									0.7										
NEPM (1999) EIL - Commercial/Industrial																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																									0.7										
NEPM (1999) HSL B Residential - Asbestos																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																	
AI_TP59_0.1	AI_TP59	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP59_0.4	AI_TP59	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP60_0.1	AI_TP60	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP60_0.5	AI_TP60	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP61_0.1	AI_TP61	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP61_0.4	AI_TP61	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP62_0.1	AI_TP62	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP62_0.4	AI_TP62	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP66_0.1	AI_TP66	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP66_0.4	AI_TP66	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP67_0.1	AI_TP67	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP67_0.4	AI_TP67	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP71_0.1	AI_TP71	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP71_0.4	AI_TP71	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP75_0.1	AI_TP75	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP75_0.4	AI_TP75	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP76_0.1	AI_TP76	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP76_0.4	AI_TP76	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP78_0.1	AI_TP78	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP78_0.3	AI_TP78	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP79_0.4	AI_TP79	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP80_0.4	AI_TP80	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP81_0.1	AI_TP81	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP81_0.4	AI_TP81	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP82_0.1	AI_TP82	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP82_0.3	AI_TP82	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP83_0.1	AI_TP83	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP83_0.3	AI_TP83	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP84_0.1	AI_TP84	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP84_0.3	AI_TP84	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP85_0.3	AI_TP85	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP86_0.1	AI_TP86	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP86_0.4	AI_TP86	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP88_0.1	AI_TP88	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP88_0.3	AI_TP88	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP89_0.1	AI_TP89	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5

	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	2-naphthylamine	Benzo(k)fluoranthene	2-nitroaniline	Chrysene	Dibenz(a,h)anthracene	2-Picoline	3,3-Dichlorobenzidine
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																
NEPM (1999) Management Limits - Urban residential & open space (fine)																																
NEPM (1999) HIL A - Residential (garden)																																
NEPM (1999) HSL A Residential - Asbestos																																
NEPM (1999) HIL C - Recreation																																
NEPM (1999) HSL C Recreation - Asbestos																																
NEPM (1999) HIL D - Commercial/Industrial																																
NEPM (1999) HSL D Comm/Indust - Asbestos																																
NEPM (1999) EIL - Urban Residential & Open Space																																
NEPM (1999) ESL - Urban Residential & Open Space (fine)																							0.7									
NEPM (1999) EIL - Commercial/Industrial																																
NEPM (1999) ESL - Commercial/Industrial (fine)																							0.7									
NEPM (1999) HSL B Residential - Asbestos																																

Field_ID	LocCode	Sampled_Date-Time																																
AI_TP89_0.3	AI_TP89	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP90_0.1	AI_TP90	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP90_0.3	AI_TP90	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP91_0.1	AI_TP91	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP91_0.3	AI_TP91	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP92_0.3	AI_TP92	15/11/2021	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	<1
AI_TP92_0.5	AI_TP92	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP93_0.3	AI_TP93	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP93_0.1	AI_TP93	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP94_0.3	AI_TP94	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP94_0.1	AI_TP94	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP95_0.3	AI_TP95	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP95_0.1	AI_TP95	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP96_0.1	AI_TP96	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP96_0.3	AI_TP96	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<1	-	<1	-	-	<0.5	<0.5
AI_TP98_0.1	AI_TP98	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP98_0.3	AI_TP98	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5
AI_TP99_0.3	AI_TP99	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	-	<1	-	-	<0.5	<0.5

Statistical Summary

Number of Results	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	14	18	10	16	15	14	16	466	18	466	9	5	466	466
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<0.5	<1	<1
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.3	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.31	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.31	0.25	0.5	0.25	0.25	0.25	0.25
Median Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.25	0.25
Standard Deviation	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.11	0.012	0.012	0.016	0.012	0.012	0	0.012	0.19	0	0	0	0	0	0	0	0.11	0	0	0	0	0.016	0.016
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	(4-(dimethylamino) azobenzene	Phenanthrene	,4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
NEPM (1999) Management Limits - Urban residential & open spa																																									
NEPM (1999) HIL A - Residential (garden)															3																										
NEPM (1999) HSL A Residential - Asbestos																																									
NEPM (1999) HIL C - Recreation															3																										
NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
A1_TP128_0.1	A1_TP128	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP128_0.3	A1_TP128	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP129_0.1	A1_TP129	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP129_0.3	A1_TP129	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP130_0.1	A1_TP130	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP130_0.3	A1_TP130	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP131_0.1	A1_TP131	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP131_0.3	A1_TP131	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP153_0.1	A1_TP153	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP153_0.3	A1_TP153	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP159_0.3	A1_TP159	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP256_0.1	A1_TP256	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP256_0.3	A1_TP256	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP257_0.1	A1_TP257	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP257_0.3	A1_TP257	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP258_0.1	A1_TP258	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP258_0.3	A1_TP258	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP259_0.1	A1_TP259	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP259_0.3	A1_TP259	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP260_0.1	A1_TP260	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP260_0.3	A1_TP260	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP262_0.1	A1_TP262	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP262_0.3	A1_TP262	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP303_0.1	A1_TP303	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP303_0.3	A1_TP303	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	(4-(dimethylamino) azobenzene	Phenanthrene	,4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
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NEPM (1999) HIL A - Residential (garden)															3																										
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NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
A1_TP305_0.1	A1_TP305	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP305_0.3	A1_TP305	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP315_0.1	A1_TP315	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP315_0.3	A1_TP315	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP36_0.1	A1_TP36	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
A1_TP36_0.3	A1_TP36	16/06/2022	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP02-0.1	AI_TP02	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP02-0.3	AI_TP02	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP03-0.1	AI_TP03	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP03-0.3	AI_TP03	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP05_0.1	AI_TP05	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP05_0.3	AI_TP05	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP06_0.3	AI_TP06	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP06_0.1	AI_TP06	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP08_0.1	AI_TP08	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP08_0.3	AI_TP08	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP09_0.1	AI_TP09	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP09_0.4	AI_TP09	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP100_0.1	AI_TP100	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP100_0.3	AI_TP100	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP101_0.1	AI_TP101	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP101_0.3	AI_TP101	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP102_0.3	AI_TP102	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP102_0.1	AI_TP102	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP103_0.3	AI_TP103	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP103_0.1	AI_TP103	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP104_0.3	AI_TP104	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP104_0.1	AI_TP104	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP105_0.1	AI_TP105	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP105_0.4	AI_TP105	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP107_0.1	AI_TP107	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP107_0.3	AI_TP107	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP108_0.1	AI_TP108	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP108_0.5	AI_TP108	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP109_0.1	AI_TP109	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP109_0.3	AI_TP109	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP11-0.1	AI_TP11	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP110_0.1	AI_TP110	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP110_0.3	AI_TP110	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP111_0.3	AI_TP111	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP111_0.1	AI_TP111	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP112_0.3	AI_TP112	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP112_0.1	AI_TP112	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP113_0.3	AI_TP113	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP113_0.1	AI_TP113	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	(4-(dimethylamino) azobenzene	Phenanthrene	,4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
NEPM (1999) Management Limits - Urban residential & open spa																																									
NEPM (1999) HIL A - Residential (garden)															3																										
NEPM (1999) HSL A Residential - Asbestos																																									
NEPM (1999) HIL C - Recreation															3																										
NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
AI_TP115_0.1	AI_TP115	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP115_0.3	AI_TP115	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP116_0.1	AI_TP116	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP117_0.1	AI_TP117	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP117_0.2	AI_TP117	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP118_0.1	AI_TP118	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP118_0.2	AI_TP118	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP119_0.3	AI_TP119	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP119_0.1	AI_TP119	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP12_0.1	AI_TP12	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP12_0.3	AI_TP12	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP120_0.3	AI_TP120	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP120_0.1	AI_TP120	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP121_0.3	AI_TP121	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP121_0.1	AI_TP121	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP122_0.3	AI_TP122	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP122_0.1	AI_TP122	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP123_0.3	AI_TP123	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP123_0.1	AI_TP123	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP124_0.3	AI_TP124	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP124_0.1	AI_TP124	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP125_0.3	AI_TP125	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP125_0.1	AI_TP125	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP126_0.3	AI_TP126	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP126_0.1	AI_TP126	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP127_0.3	AI_TP127	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP127_0.1	AI_TP127	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP13_0.1	AI_TP13	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP13_0.3	AI_TP13	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP132_0.1	AI_TP132	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP132_0.3	AI_TP132	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP133_0.1	AI_TP133	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP133_0.3	AI_TP133	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP134_0.1	AI_TP134	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP134_0.3	AI_TP134	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP135_0.1	AI_TP135	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP135_0.3	AI_TP135	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP136_0.1	AI_TP136	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP136_0.3	AI_TP136	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP137_0.1	AI_TP137	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP137_0.3	AI_TP137	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	(4-(dimethylamino) azobenzene	Phenanthrene	4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
NEPM (1999) Management Limits - Urban residential & open spa																																									
NEPM (1999) HIL A - Residential (garden)															3																										
NEPM (1999) HSL A Residential - Asbestos																																									
NEPM (1999) HIL C - Recreation															3																										
NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
AI_TP138_0.1	AI_TP138	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP138_0.3	AI_TP138	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP139_0.1	AI_TP139	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP139_0.3	AI_TP139	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP14_0.1	AI_TP14	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP14_0.4	AI_TP14	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP140_0.1	AI_TP140	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP140_0.3	AI_TP140	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP141_0.1	AI_TP141	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP141_0.3	AI_TP141	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP142_0.3	AI_TP142	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP142_0.1	AI_TP142	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP143_0.3	AI_TP143	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP143_0.1	AI_TP143	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP144_0.2	AI_TP144	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP144_0.1	AI_TP144	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP144_0.2	AI_TP144	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP145_0.3	AI_TP145	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP145_0.1	AI_TP145	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP146_0.3	AI_TP146	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP146_0.1	AI_TP146	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP147_0.3	AI_TP147	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP147_0.1	AI_TP147	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP148_0.3	AI_TP148	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP148_0.1	AI_TP148	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP149_0.3	AI_TP149	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP149_0.1	AI_TP149	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP15-0.1	AI_TP15	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP15-0.3	AI_TP15	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP150_0.1	AI_TP150	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP150_0.3	AI_TP150	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP151_0.1	AI_TP151	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP151_0.3	AI_TP151	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP152_0.1	AI_TP152	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP152_0.3	AI_TP152	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP158_0.1	AI_TP158	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP158_0.3	AI_TP158	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP16_0.1	AI_TP16	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP16_0.3	AI_TP16	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP160_0.3	AI_TP160	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP163_0.1	AI_TP163	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP163_0.3	AI_TP163	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP164_0.1	AI_TP164	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP164_0.4	AI_TP164	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP165_0.1	AI_TP165	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP165_0.3	AI_TP165	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP166_0.1	AI_TP166	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP166_0.3	AI_TP166	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1

WPCA,Aerotropolis

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	(4-(dimethylamino) azobenzene	Phenanthrene	,4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
NEPM (1999) Management Limits - Urban residential & open spa																																									
NEPM (1999) HIL A - Residential (garden)															3																										
NEPM (1999) HSL A Residential - Asbestos																																									
NEPM (1999) HIL C - Recreation															3																										
NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
AI_TP167_0.1	AI_TP167	27/10/2021	-	-	-	-	<1	-	<1	-	<1	-	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<2	<2	<1	<1	<10	<1	<1	<1	<2	<2	<1	<1	<1
AI_TP167_0.3	AI_TP167	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP168_0.1	AI_TP168	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP168_0.3	AI_TP168	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP169_0.1	AI_TP169	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP169_0.3	AI_TP169	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP170_0.1	AI_TP170	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP170_0.3	AI_TP170	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP171_0.1	AI_TP171	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP171_0.3	AI_TP171	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP172_0.1	AI_TP172	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP172_0.3	AI_TP172	27/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP173_0.1	AI_TP173	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP173_0.4	AI_TP173	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP176_0.1	AI_TP176	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP176_0.3	AI_TP176	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP177_0.1	AI_TP177	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP177_0.4	AI_TP177	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP178_0.1	AI_TP178	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP178_0.4	AI_TP178	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP179_0.1	AI_TP179	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP179_0.4	AI_TP179	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP18_0.2	AI_TP18	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP181_0.1	AI_TP181	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP181_0.3	AI_TP181	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP182_0.1	AI_TP182	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP182_0.3	AI_TP182	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP183_0.1	AI_TP183	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP183_0.3	AI_TP183	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP184_0.1	AI_TP184	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP184_0.4	AI_TP184	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP186_0.1	AI_TP186	3/11/2021	-	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP186_0.3	AI_TP186	3/11/2021	<0.5	<0.5	-	-	<0.5	-	<0.5	-	<0.5	0.6	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP187_0.1	AI_TP187	3/11/2021	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP187_0.3	AI_TP187	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP188_0.1	AI_TP188	3/11/2021	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP188_0.3	AI_TP188	3/11/2021	-	-	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP189_0.1	AI_TP189	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP189_0.3	AI_TP189	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP19_0.1	AI_TP19	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP19_0.3	AI_TP19	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP193_0.1	AI_TP193	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP193_0.3	AI_TP193	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP194_0.1	AI_TP194	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP194_0.3	AI_TP194	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP195_0.1	AI_TP195	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP195_0.3	AI_TP195	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP196_0.1	AI_TP196	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP196_0.3	AI_TP196	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP197_0.1	AI_TP197	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP197_0.4	AI_TP197	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP20_0.1	AI_TP20	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP20_0.4	AI_TP20	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP200_0.1	AI_TP200	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP200_0.3	AI_TP200	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP201_0.1	AI_TP201	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	4-(dimethylamino) azobenzene	Phenanthrene	4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
NEPM (1999) Management Limits - Urban residential & open spa																																									
NEPM (1999) HIL A - Residential (garden)															3																										
NEPM (1999) HSL A Residential - Asbestos																																									
NEPM (1999) HIL C - Recreation															3																										
NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
AI_TP201_0.3	AI_TP201	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP202_0.1	AI_TP202	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP202_0.3	AI_TP202	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP203_0.1	AI_TP203	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP203_0.3	AI_TP203	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP204_0.1	AI_TP204	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP204_0.3	AI_TP204	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP205_0.1	AI_TP205	3/11/2021	-	-	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP205_0.3	AI_TP205	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	0.6	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP208_0.1	AI_TP208	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP208_0.3	AI_TP208	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP209_0.1	AI_TP209	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP209_0.3	AI_TP209	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP21_0.1	AI_TP21	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP21_0.3	AI_TP21	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP210_0.1	AI_TP210	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP210_0.3	AI_TP210	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP211_0.1	AI_TP211	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP211_0.3	AI_TP211	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP212_0.1	AI_TP212	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP212_0.3	AI_TP212	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP213_0.1	AI_TP213	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP213_0.3	AI_TP213	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP214_0.1	AI_TP214	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP214_0.3	AI_TP214	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP215_0.1	AI_TP215	3/11/2021	-	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	-	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP215_0.3	AI_TP215	3/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP216_0.1	AI_TP216	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP216_0.4	AI_TP216	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP217_0.1	AI_TP217	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP217_0.3	AI_TP217	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP218_0.1	AI_TP218	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP218_0.3	AI_TP218	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP219_0.1	AI_TP219	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP219_0.3	AI_TP219	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP22_0.1	AI_TP22	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP22_0.3	AI_TP22	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP220_0.1	AI_TP220	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP220_0.3	AI_TP220	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP221_0.1	AI_TP221	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP221_0.3	AI_TP221	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP222_0.1	AI_TP222	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP222_0.3	AI_TP222	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP223_0.1	AI_TP223	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP223_0.3	AI_TP223	2/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1

WPCA,Aerotropolis

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	(4-(dimethylamino) azobenzene	Phenanthrene	4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
NEPM (1999) Management Limits - Urban residential & open spa																																									
NEPM (1999) HIL A - Residential (garden)															3																										
NEPM (1999) HSL A Residential - Asbestos																																									
NEPM (1999) HIL C - Recreation															3																										
NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
AI_TP224_0.1	AI_TP224	3/11/2021	-	<0.5	-	<0.5	<0.5	-	<0.5	-	<0.5	0.6	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP224_0.3	AI_TP224	3/11/2021	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP225_0.1	AI_TP225	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP225_0.4	AI_TP225	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP226_0.1	AI_TP226	3/11/2021	-	-	<0.5	-	<0.5	-	<0.5	-	<0.5	0.6	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP226_0.3	AI_TP226	3/11/2021	-	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	0.6	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP227_0.1	AI_TP227	3/11/2021	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP227_0.3	AI_TP227	3/11/2021	-	-	-	<0.5	<0.5	-	<0.5	-	<0.5	-	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP228_0.1	AI_TP228	3/11/2021	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	-	<0.5	-	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP228_0.3	AI_TP228	3/11/2021	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	-	<0.5	0.6	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP229_0.1	AI_TP229	3/11/2021	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	-	<0.5	-	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP229_0.3	AI_TP229	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP23_0.1	AI_TP23	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP23_0.4	AI_TP23	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP230_0.1	AI_TP230	3/11/2021	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP230_0.3	AI_TP230	3/11/2021	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	0.6	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP231_0.1	AI_TP231	3/11/2021	-	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	0.6	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP231_0.3	AI_TP231	3/11/2021	-	-	<0.5	-	<0.5	-	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP232_0.1	AI_TP232	3/11/2021	<0.5	<0.5	-	-	<0.5	-	<0.5	-	<0.5	0.6	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP232_0.3	AI_TP232	3/11/2021	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	-	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP233_0.1	AI_TP233	3/11/2021	-	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP233_0.3	AI_TP233	3/11/2021	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	0.6	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP234_0.1	AI_TP234	3/11/2021	-	-	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP234_0.3	AI_TP234	3/11/2021	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP235_0.1	AI_TP235	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP235_0.3	AI_TP235	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP236_0.1	AI_TP236	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP236_0.3	AI_TP236	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP237_0.1	AI_TP237	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP237_0.3	AI_TP237	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP238_0.1	AI_TP238	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP238_0.3	AI_TP238	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP239_0.1	AI_TP239	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP239_0.3	AI_TP239	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP24_0.1	AI_TP24	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP24_0.3	AI_TP24	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP240_0.1	AI_TP240	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP240_0.3	AI_TP240	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP242_0.1	AI_TP242	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP242_0.3	AI_TP242	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP243_0.1	AI_TP243	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP243_0.3	AI_TP243	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP244_0.1	AI_TP244	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP244_0.3	AI_TP244	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP245_0.1	AI_TP245	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP245_0.3	AI_TP245	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP246_0.1	AI_TP246	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP246_0.3	AI_TP246	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP247_0.1	AI_TP247	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP247_0.3	AI_TP247	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP248_0.1	AI_TP248	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1

WPCA,Aerotropolis

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	(4-(dimethylamino) azobenzene	Phenanthrene	4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
NEPM (1999) Management Limits - Urban residential & open spa																																									
NEPM (1999) HIL A - Residential (garden)															3																										
NEPM (1999) HSL A Residential - Asbestos																																									
NEPM (1999) HIL C - Recreation															3																										
NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
AI_TP248_0.3	AI_TP248	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP249_0.1	AI_TP249	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP249_0.3	AI_TP249	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP25_0.1	AI_TP25	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP25_0.3	AI_TP25	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP250_0.1	AI_TP250	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP250_0.3	AI_TP250	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP251_0.1	AI_TP251	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP251_0.3	AI_TP251	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP252_0.1	AI_TP252	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP252_0.3	AI_TP252	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP253_0.1	AI_TP253	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP253_0.3	AI_TP253	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP254_0.1	AI_TP254	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP254_0.3	AI_TP254	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP255_0.1	AI_TP255	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP255_0.3	AI_TP255	1/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP263_0.1	AI_TP263	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP263_0.3	AI_TP263	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP264_0.1	AI_TP264	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP264_0.3	AI_TP264	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP265_0.1	AI_TP265	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP265_0.3	AI_TP265	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP266_0.1	AI_TP266	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP266_0.3	AI_TP266	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP267_0.1	AI_TP267	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP267_0.3	AI_TP267	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP268_0.1	AI_TP268	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP268_0.3	AI_TP268	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP269_0.1	AI_TP269	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP269_0.3	AI_TP269	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP27_0.1	AI_TP27	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP27_0.4	AI_TP27	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP270_0.1	AI_TP270	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP270_0.3	AI_TP270	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP271_0.1	AI_TP271	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP271_0.3	AI_TP271	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP272_0.1	AI_TP272	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP272_0.3	AI_TP272	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP277_0.1	AI_TP277	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP277_0.3	AI_TP277	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP278_0.1	AI_TP278	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP278_0.3	AI_TP278	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP279_0.1	AI_TP279	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP279_0.3	AI_TP279	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1

WPCA,Aerotropolis

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	(4-(dimethylamino) azobenzene	Phenanthrene	,4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
NEPM (1999) Management Limits - Urban residential & open spa																																									
NEPM (1999) HIL A - Residential (garden)															3																										
NEPM (1999) HSL A Residential - Asbestos																																									
NEPM (1999) HIL C - Recreation															3																										
NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
AI_TP28_0.1	AI_TP28	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP28_0.5	AI_TP28	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP280_0.1	AI_TP280	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP280_0.3	AI_TP280	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP281_0.1	AI_TP281	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP281_0.3	AI_TP281	29/10/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<2.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP29_0.1	AI_TP29	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP29_0.3	AI_TP29	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP30_0.1	AI_TP30	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP30_0.3	AI_TP30	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP31_0.1	AI_TP31	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP31_0.3	AI_TP31	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP32_0.1	AI_TP32	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP32_0.4	AI_TP32	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP33-0.1	AI_TP33	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP34-0.1	AI_TP34	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP35-0.1	AI_TP35	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP35-0.2	AI_TP35	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP36_0.1	AI_TP36	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP36_0.4	AI_TP36	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP36-0.1	AI_TP36	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP36-0.3	AI_TP36	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP37_0.1	AI_TP37	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP37_0.4	AI_TP37	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP39_0.1	AI_TP39	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP39_0.3	AI_TP39	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP40_0.1	AI_TP40	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP40_0.3	AI_TP40	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP41_0.1	AI_TP41	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP41_0.3	AI_TP41	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP42_0.1	AI_TP42	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP42_0.4	AI_TP42	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP43-0.1	AI_TP43	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP43-0.3	AI_TP43	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP45_0.1	AI_TP45	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP45_0.3	AI_TP45	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP46_0.1	AI_TP46	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP46_0.4	AI_TP46	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP47_0.1	AI_TP47	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP47_0.4	AI_TP47	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP48_0.1	AI_TP48	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP48_0.4	AI_TP48	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP49_0.1	AI_TP49	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP49_0.3	AI_TP49	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP50_0.1	AI_TP50	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP50_0.3	AI_TP50	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP51_0.1	AI_TP51	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP51_0.3	AI_TP51	4/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP54-0.1	AI_TP54	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP54-0.3	AI_TP54	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP55-0.1	AI_TP55	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP55-0.3	AI_TP55	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP56-0.1	AI_TP56	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP56-0.3	AI_TP56	9/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP58_0.1	AI_TP58	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP58_0.4	AI_TP58	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1

WPCA,Aerotropolis

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	4-(dimethylamino) azobenzene	Phenanthrene	4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
NEPM (1999) Management Limits - Urban residential & open spa																																									
NEPM (1999) HIL A - Residential (garden)															3																										
NEPM (1999) HSL A Residential - Asbestos																																									
NEPM (1999) HIL C - Recreation															3																										
NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
AI_TP59_0.1	AI_TP59	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP59_0.4	AI_TP59	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP60_0.1	AI_TP60	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP60_0.5	AI_TP60	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP61_0.1	AI_TP61	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP61_0.4	AI_TP61	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP62_0.1	AI_TP62	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP62_0.4	AI_TP62	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP66_0.1	AI_TP66	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP66_0.4	AI_TP66	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP67_0.1	AI_TP67	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP67_0.4	AI_TP67	17/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP71_0.1	AI_TP71	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP71_0.4	AI_TP71	20/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP75_0.1	AI_TP75	21/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP75_0.4	AI_TP75	21/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP76_0.1	AI_TP76	21/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP76_0.4	AI_TP76	21/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP78_0.1	AI_TP78	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP78_0.3	AI_TP78	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP79_0.4	AI_TP79	21/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP80_0.4	AI_TP80	21/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP81_0.1	AI_TP81	21/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP81_0.4	AI_TP81	21/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP82_0.1	AI_TP82	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP82_0.3	AI_TP82	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP83_0.1	AI_TP83	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP83_0.3	AI_TP83	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP84_0.1	AI_TP84	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP84_0.3	AI_TP84	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP85_0.3	AI_TP85	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP86_0.1	AI_TP86	21/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP86_0.4	AI_TP86	21/12/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP88_0.1	AI_TP88	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP88_0.3	AI_TP88	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP89_0.1	AI_TP89	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1

WPCA,Aerotropolis

			SVOC																																						
			Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	4-(dimethylamino) azobenzene	Phenanthrene	4,4-DDE	Pyrene	4-aminobiphenyl	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	4-bromophenyl phenyl ether	Benzo(a)pyrene TEQ calc (Zero)	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	0.4	0.5	0.5	1
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m						5																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m						NL																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m						NL																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																									
NEPM (1999) Management Limits - Urban residential & open spa																																									
NEPM (1999) HIL A - Residential (garden)															3																										
NEPM (1999) HSL A Residential - Asbestos																																									
NEPM (1999) HIL C - Recreation															3																										
NEPM (1999) HSL C Recreation - Asbestos																																									
NEPM (1999) HIL D - Commercial/Industrial															40																										
NEPM (1999) HSL D Comm/Indust - Asbestos																																									
NEPM (1999) EIL - Urban Residential & Open Space						170																																			180
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																									
NEPM (1999) EIL - Commercial/Industrial						370																																			640
NEPM (1999) ESL - Commercial/Industrial (fine)																																									
NEPM (1999) HSL B Residential - Asbestos																																									
Field_ID	**LocCode**	**Sampled_Date-Time**																																							
AI_TP89_0.3	AI_TP89	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP90_0.1	AI_TP90	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP90_0.3	AI_TP90	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP91_0.1	AI_TP91	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP91_0.3	AI_TP91	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP92_0.3	AI_TP92	15/11/2021	-	-	-	-	<1	-	<1	-	<1	-	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1
AI_TP92_0.5	AI_TP92	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP93_0.3	AI_TP93	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP93_0.1	AI_TP93	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP94_0.3	AI_TP94	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP94_0.1	AI_TP94	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP95_0.3	AI_TP95	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP95_0.1	AI_TP95	8/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP96_0.1	AI_TP96	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP96_0.3	AI_TP96	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP98_0.1	AI_TP98	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP98_0.3	AI_TP98	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
AI_TP99_0.3	AI_TP99	15/11/2021	-	-	-	-	<0.5	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
Statistical Summary																																									
Number of Results			11	18	14	11	466	6	466	5	466	19	21	466	14	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466
Number of Detects			0	0	0	0	0	0	0	0	0	19	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<0.4	<0.5	<0.5	<1
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<1	0.6	1.2	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<2	<2	<1	<2.5	<10	<1	<1	<1	<2	<2	<1	<1	<1
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2.5	0.25	0.26	0.5	0.5	0.25	0.31	2.5	0.25	0.25	0.1	0.5	0.2	0.25	0.25	0.5
Median Concentration			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2.5	0.25	0.25	0.5	0.5	0.25	0.25	2.5	0.25	0.25	0.1	0.5	0.2	0.25	0.25	0.5
Standard Deviation			0	0	0	0	0.016	0	0.016	0	0.016	0	0	0.016	0	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0	0.016	0.048	0.023	0.023	0.012	0.25	0.12	0.012	0.012	0.02	0.023	0.04	0.016	0.016	0
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WPCA,Aerotropolis

			4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																			
NEPM (1999) Management Limits - Urban residential & open spa																																																			
NEPM (1999) HIL A - Residential (garden)					100				3000								10				6		10				300																								
NEPM (1999) HSL A Residential - Asbestos																																																			
NEPM (1999) HIL C - Recreation					120				40000								20				10		10				400																								
NEPM (1999) HSL C Recreation - Asbestos																																																			
NEPM (1999) HIL D - Commercial/Industrial					660				240000								100				50		80				2500																								
NEPM (1999) HSL D Comm/Indust - Asbestos																																																			
NEPM (1999) EIL - Urban Residential & Open Space																																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																																			
NEPM (1999) EIL - Commercial/Industrial																																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																																																			
NEPM (1999) HSL B Residential - Asbestos																																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																																		
A1_TP128_0.1	A1_TP128	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP128_0.3	A1_TP128	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP129_0.1	A1_TP129	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP129_0.3	A1_TP129	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP130_0.1	A1_TP130	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP130_0.3	A1_TP130	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP131_0.1	A1_TP131	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP131_0.3	A1_TP131	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP153_0.1	A1_TP153	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP153_0.3	A1_TP153	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP159_0.3	A1_TP159	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP256_0.1	A1_TP256	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP256_0.3	A1_TP256	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP257_0.1	A1_TP257	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP257_0.3	A1_TP257	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP258_0.1	A1_TP258	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP258_0.3	A1_TP258	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP259_0.1	A1_TP259	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP259_0.3	A1_TP259	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP260_0.1	A1_TP260	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP260_0.3	A1_TP260	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP262_0.1	A1_TP262	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP262_0.3	A1_TP262	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP303_0.1	A1_TP303	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP303_0.3	A1_TP303	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

WPCA,Aerotropolis

			4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																			
NEPM (1999) Management Limits - Urban residential & open spa																			
NEPM (1999) HIL A - Residential (garden)							100				3000							10	
NEPM (1999) HSL A Residential - Asbestos																			
NEPM (1999) HIL C - Recreation							120				40000							20	
NEPM (1999) HSL C Recreation - Asbestos																			
NEPM (1999) HIL D - Commercial/Industrial							660				240000							100	
NEPM (1999) HSL D Comm/Indust - Asbestos																			
NEPM (1999) EIL - Urban Residential & Open Space																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																			
NEPM (1999) EIL - Commercial/Industrial																			
NEPM (1999) ESL - Commercial/Industrial (fine)																			
NEPM (1999) HSL B Residential - Asbestos																			
Field_ID	LocCode	Sampled_Date-Time																	
A1_TP305_0.1	A1_TP305	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP305_0.3	A1_TP305	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP315_0.1	A1_TP315	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP315_0.3	A1_TP315	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP36_0.1	A1_TP36	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP36_0.3	A1_TP36	16/06/2022	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP02-0.1	AI_TP02	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP02-0.3	AI_TP02	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP03-0.1	AI_TP03	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP03-0.3	AI_TP03	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP05_0.1	AI_TP05	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP05_0.3	AI_TP05	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP06_0.3	AI_TP06	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP06_0.1	AI_TP06	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP08_0.1	AI_TP08	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP08_0.3	AI_TP08	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP09_0.1	AI_TP09	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP09_0.4	AI_TP09	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP100_0.1	AI_TP100	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP100_0.3	AI_TP100	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP101_0.1	AI_TP101	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP101_0.3	AI_TP101	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP102_0.3	AI_TP102	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP102_0.1	AI_TP102	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP103_0.3	AI_TP103	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP103_0.1	AI_TP103	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP104_0.3	AI_TP104	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP104_0.1	AI_TP104	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP105_0.1	AI_TP105	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP105_0.4	AI_TP105	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP107_0.1	AI_TP107	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP107_0.3	AI_TP107	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP108_0.1	AI_TP108	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP108_0.5	AI_TP108	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP109_0.1	AI_TP109	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP109_0.3	AI_TP109	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP11-0.1	AI_TP11	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP110_0.1	AI_TP110	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP110_0.3	AI_TP110	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP111_0.3	AI_TP111	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP111_0.1	AI_TP111	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP112_0.3	AI_TP112	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP112_0.1	AI_TP112	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP113_0.3	AI_TP113	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP113_0.1	AI_TP113	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

			Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																			
NEPM (1999) Management Limits - Urban residential & open spa																			
NEPM (1999) HIL A - Residential (garden)					6		10				300								
NEPM (1999) HSL A Residential - Asbestos																			
NEPM (1999) HIL C - Recreation					10		10				400								
NEPM (1999) HSL C Recreation - Asbestos																			
NEPM (1999) HIL D - Commercial/Industrial					50		80				2500								
NEPM (1999) HSL D Comm/Indust - Asbestos																			
NEPM (1999) EIL - Urban Residential & Open Space																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																			
NEPM (1999) EIL - Commercial/Industrial																			
NEPM (1999) ESL - Commercial/Industrial (fine)																			
NEPM (1999) HSL B Residential - Asbestos																			
Field_ID	LocCode	Sampled_Date-Time																	
A1_TP305_0.1	A1_TP305	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP305_0.3	A1_TP305	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP315_0.1	A1_TP315	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP315_0.3	A1_TP315	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP36_0.1	A1_TP36	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP36_0.3	A1_TP36	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP02-0.1	AI_TP02	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP02-0.3	AI_TP02	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP03-0.1	AI_TP03	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP03-0.3	AI_TP03	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP05_0.1	AI_TP05	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP05_0.3	AI_TP05	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP06_0.3	AI_TP06	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP06_0.1	AI_TP06	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP08_0.1	AI_TP08	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP08_0.3	AI_TP08	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP09_0.1	AI_TP09	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP09_0.4	AI_TP09	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP100_0.1	AI_TP100	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP100_0.3	AI_TP100	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP101_0.1	AI_TP101	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP101_0.3	AI_TP101	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP102_0.3	AI_TP102	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP102_0.1	AI_TP102	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP103_0.3	AI_TP103	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP103_0.1	AI_TP103	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP104_0.3	AI_TP104	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP104_0.1	AI_TP104	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP105_0.1	AI_TP105	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP105_0.4	AI_TP105	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP107_0.1	AI_TP107	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP107_0.3	AI_TP107	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP108_0.1	AI_TP108	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP108_0.5	AI_TP108	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP109_0.1	AI_TP109	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP109_0.3	AI_TP109	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP11-0.1	AI_TP11	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP110_0.1	AI_TP110	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP110_0.3	AI_TP110	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP111_0.3	AI_TP111	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP111_0.1	AI_TP111	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP112_0.3	AI_TP112	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP112_0.1	AI_TP112	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP113_0.3	AI_TP113	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP113_0.1	AI_TP113	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

			Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																
NEPM (1999) Management Limits - Commercial/Industrial (fine)																
NEPM (1999) Management Limits - Urban residential & open spa																
NEPM (1999) HIL A - Residential (garden)																
NEPM (1999) HSL A Residential - Asbestos																
NEPM (1999) HIL C - Recreation																
NEPM (1999) HSL C Recreation - Asbestos																
NEPM (1999) HIL D - Commercial/Industrial																
NEPM (1999) HSL D Comm/Indust - Asbestos																
NEPM (1999) EIL - Urban Residential & Open Space																
NEPM (1999) ESL - Urban Residential & Open Space (fine)																
NEPM (1999) EIL - Commercial/Industrial																
NEPM (1999) ESL - Commercial/Industrial (fine)																
NEPM (1999) HSL B Residential - Asbestos																
Field_ID	LocCode	Sampled_Date-Time														
A1_TP305_0.1	A1_TP305	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP305_0.3	A1_TP305	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP315_0.1	A1_TP315	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP315_0.3	A1_TP315	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP36_0.1	A1_TP36	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP36_0.3	A1_TP36	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP02-0.1	AI_TP02	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP02-0.3	AI_TP02	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP03-0.1	AI_TP03	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP03-0.3	AI_TP03	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP05_0.1	AI_TP05	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP05_0.3	AI_TP05	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP06_0.3	AI_TP06	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP06_0.1	AI_TP06	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP08_0.1	AI_TP08	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP08_0.3	AI_TP08	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP09_0.1	AI_TP09	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP09_0.4	AI_TP09	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP100_0.1	AI_TP100	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP100_0.3	AI_TP100	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP101_0.1	AI_TP101	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP101_0.3	AI_TP101	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP102_0.3	AI_TP102	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP102_0.1	AI_TP102	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP103_0.3	AI_TP103	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP103_0.1	AI_TP103	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP104_0.3	AI_TP104	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP104_0.1	AI_TP104	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP105_0.1	AI_TP105	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP105_0.4	AI_TP105	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP107_0.1	AI_TP107	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP107_0.3	AI_TP107	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP108_0.1	AI_TP108	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP108_0.5	AI_TP108	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP109_0.1	AI_TP109	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP109_0.3	AI_TP109	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP11-0.1	AI_TP11	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP110_0.1	AI_TP110	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP110_0.3	AI_TP110	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP111_0.3	AI_TP111	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP111_0.1	AI_TP111	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP112_0.3	AI_TP112	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP112_0.1	AI_TP112	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP113_0.3	AI_TP113	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP113_0.1	AI_TP113	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

WPCA,Aerotropolis

	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																																	
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																																	
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																																	
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																																	
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																																	
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																																	
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																	
NEPM (1999) Management Limits - Urban residential & open spa																																																	
NEPM (1999) HIL A - Residential (garden)					100				3000							10				6		10				300																							
NEPM (1999) HSL A Residential - Asbestos																																																	
NEPM (1999) HIL C - Recreation					120				40000							20				10		10				400																							
NEPM (1999) HSL C Recreation - Asbestos																																																	
NEPM (1999) HIL D - Commercial/Industrial					660				240000							100				50		80				2500																							
NEPM (1999) HSL D Comm/Indust - Asbestos																																																	
NEPM (1999) EIL - Urban Residential & Open Space																																																	
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																																	
NEPM (1999) EIL - Commercial/Industrial																																																	
NEPM (1999) ESL - Commercial/Industrial (fine)																																																	
NEPM (1999) HSL B Residential - Asbestos																																																	

Field_ID	LocCode	Sampled_Date-Time																																																
AI_TP115_0.1	AI_TP115	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP115_0.3	AI_TP115	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP116_0.1	AI_TP116	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP117_0.1	AI_TP117	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP117_0.2	AI_TP117	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP118_0.1	AI_TP118	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP118_0.2	AI_TP118	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP119_0.3	AI_TP119	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP119_0.1	AI_TP119	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP12_0.1	AI_TP12	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP12_0.3	AI_TP12	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP120_0.3	AI_TP120	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP120_0.1	AI_TP120	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP121_0.3	AI_TP121	8/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP121_0.1	AI_TP121	8/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP122_0.3	AI_TP122	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP122_0.1	AI_TP122	8/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP123_0.3	AI_TP123	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP123_0.1	AI_TP123	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP124_0.3	AI_TP124	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP124_0.1	AI_TP124	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP125_0.3	AI_TP125	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP125_0.1	AI_TP125	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP126_0.3	AI_TP126	8/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP126_0.1	AI_TP126	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP127_0.3	AI_TP127	8/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP127_0.1	AI_TP127	8/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP13_0.1	AI_TP13	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP13_0.3	AI_TP13	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP132_0.1	AI_TP132	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP132_0.3	AI_TP132	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP133_0.1	AI_TP133	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP133_0.3	AI_TP133	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP134_0.1	AI_TP134	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP134_0.3	AI_TP134	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP135_0.1	AI_TP135	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP135_0.3	AI_TP135	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP136_0.1	AI_TP136	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP136_0.3	AI_TP136	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP137_0.1	AI_TP137	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP137_0.3	AI_TP137	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

WPCA,Aerotropolis

Field_ID	LocCode	Sampled_Date-Time	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																		
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																		
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																		
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																		
NEPM (1999) Management Limits - Commercial/Industrial (fine)																		
NEPM (1999) Management Limits - Urban residential & open spa																		
NEPM (1999) HIL A - Residential (garden)							100				3000							10
NEPM (1999) HSL A Residential - Asbestos																		
NEPM (1999) HIL C - Recreation							120				40000							20
NEPM (1999) HSL C Recreation - Asbestos																		
NEPM (1999) HIL D - Commercial/Industrial							660				240000							100
NEPM (1999) HSL D Comm/Indust - Asbestos																		
NEPM (1999) EIL - Urban Residential & Open Space																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)																		
NEPM (1999) EIL - Commercial/Industrial																		
NEPM (1999) ESL - Commercial/Industrial (fine)																		
NEPM (1999) HSL B Residential - Asbestos																		
AI_TP138_0.1	AI_TP138	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP138_0.3	AI_TP138	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP139_0.1	AI_TP139	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP139_0.3	AI_TP139	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP14_0.1	AI_TP14	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP14_0.4	AI_TP14	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP140_0.1	AI_TP140	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP140_0.3	AI_TP140	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP141_0.1	AI_TP141	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP141_0.3	AI_TP141	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP142_0.3	AI_TP142	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP142_0.1	AI_TP142	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP143_0.3	AI_TP143	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP143_0.1	AI_TP143	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP144_0.1	AI_TP144	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP145_0.3	AI_TP145	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP145_0.1	AI_TP145	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP146_0.3	AI_TP146	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP146_0.1	AI_TP146	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP147_0.3	AI_TP147	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP147_0.1	AI_TP147	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP148_0.3	AI_TP148	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP148_0.1	AI_TP148	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP149_0.3	AI_TP149	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP149_0.1	AI_TP149	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP15-0.1	AI_TP15	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP15-0.3	AI_TP15	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP150_0.1	AI_TP150	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP150_0.3	AI_TP150	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP151_0.1	AI_TP151	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP151_0.3	AI_TP151	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP152_0.1	AI_TP152	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP152_0.3	AI_TP152	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP158_0.1	AI_TP158	27/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP158_0.3	AI_TP158	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP16_0.1	AI_TP16	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP16_0.3	AI_TP16	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP160_0.3	AI_TP160	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP163_0.1	AI_TP163	27/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP163_0.3	AI_TP163	27/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP164_0.1	AI_TP164	27/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP164_0.4	AI_TP164	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP165_0.1	AI_TP165	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP165_0.3	AI_TP165	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP166_0.1	AI_TP166	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP166_0.3	AI_TP166	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Field_ID	LocCode	Sampled_Date-Time	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																		
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																		
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																		
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																		
NEPM (1999) Management Limits - Commercial/Industrial (fine)																		
NEPM (1999) Management Limits - Urban residential & open spa																		
NEPM (1999) HIL A - Residential (garden)						6		10				300						
NEPM (1999) HSL A Residential - Asbestos																		
NEPM (1999) HIL C - Recreation						10		10				400						
NEPM (1999) HSL C Recreation - Asbestos																		
NEPM (1999) HIL D - Commercial/Industrial						50		80				2500						
NEPM (1999) HSL D Comm/Indust - Asbestos																		
NEPM (1999) EIL - Urban Residential & Open Space																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)																		
NEPM (1999) EIL - Commercial/Industrial																		
NEPM (1999) ESL - Commercial/Industrial (fine)																		
NEPM (1999) HSL B Residential - Asbestos																		
AI_TP138_0.1	AI_TP138	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP138_0.3	AI_TP138	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP139_0.1	AI_TP139	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP139_0.3	AI_TP139	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP14_0.1	AI_TP14	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP14_0.4	AI_TP14	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP140_0.1	AI_TP140	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP140_0.3	AI_TP140	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP141_0.1	AI_TP141	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP141_0.3	AI_TP141	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP142_0.3	AI_TP142	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP142_0.1	AI_TP142	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP143_0.3	AI_TP143	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP143_0.1	AI_TP143	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP144_0.1	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP145_0.3	AI_TP145	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP145_0.1	AI_TP145	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP146_0.3	AI_TP146	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP146_0.1	AI_TP146	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP147_0.3	AI_TP147	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP147_0.1	AI_TP147	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP148_0.3	AI_TP148	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP148_0.1	AI_TP148	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP149_0.3	AI_TP149	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP149_0.1	AI_TP149	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP15-0.1	AI_TP15	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP15-0.3	AI_TP15	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP150_0.1	AI_TP150	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP150_0.3	AI_TP150	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP151_0.1	AI_TP151	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP151_0.3	AI_TP151	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP152_0.1	AI_TP152	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP152_0.3	AI_TP152	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP158_0.1	AI_TP158	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP158_0.3	AI_TP158	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP16_0.1	AI_TP16	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP16_0.3	AI_TP16	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP160_0.3	AI_TP160	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP163_0.1	AI_TP163	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP163_0.3	AI_TP163	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP164_0.1	AI_TP164	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP164_0.4	AI_TP164	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP165_0.1	AI_TP165	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP165_0.3	AI_TP165	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP166_0.1	AI_TP166	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP166_0.3	AI_TP166	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Field_ID	LocCode	Sampled_Date-Time	Pronamide	Trifluralin	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																		
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																		
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																		
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																		
NEPM (1999) Management Limits - Commercial/Industrial (fine)																		
NEPM (1999) Management Limits - Urban residential & open spa																		
NEPM (1999) HIL A - Residential (garden)																		
NEPM (1999) HSL A Residential - Asbestos																		
NEPM (1999) HIL C - Recreation																		
NEPM (1999) HSL C Recreation - Asbestos																		
NEPM (1999) HIL D - Commercial/Industrial																		
NEPM (1999) HSL D Comm/Indust - Asbestos																		
NEPM (1999) EIL - Urban Residential & Open Space																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)																		
NEPM (1999) EIL - Commercial/Industrial																		
NEPM (1999) ESL - Commercial/Industrial (fine)																		
NEPM (1999) HSL B Residential - Asbestos																		
AI_TP138_0.1	AI_TP138	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP138_0.3	AI_TP138	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP139_0.1	AI_TP139	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP139_0.3	AI_TP139	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP14_0.1	AI_TP14	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP14_0.4	AI_TP14	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP140_0.1	AI_TP140	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP140_0.3	AI_TP140	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP141_0.1	AI_TP141	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP141_0.3	AI_TP141	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP142_0.3	AI_TP142	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP142_0.1	AI_TP142	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP143_0.3	AI_TP143	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP143_0.1	AI_TP143	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP144_0.1	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP144_0.2	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP145_0.3	AI_TP145	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP145_0.1	AI_TP145	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP146_0.3	AI_TP146	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP146_0.1	AI_TP146	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP147_0.3	AI_TP147	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP147_0.1	AI_TP147	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP148_0.3	AI_TP148	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP148_0.1	AI_TP148	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP149_0.3	AI_TP149	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP149_0.1	AI_TP149	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP15-0.1	AI_TP15	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP15-0.3	AI_TP15	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP150_0.1	AI_TP150	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP150_0.3	AI_TP150	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP151_0.1	AI_TP151	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP151_0.3	AI_TP151	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP152_0.1	AI_TP152	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP152_0.3	AI_TP152	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP158_0.1	AI_TP158	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP158_0.3	AI_TP158	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP16_0.1	AI_TP16	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP16_0.3	AI_TP16	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP160_0.3	AI_TP160	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP163_0.1	AI_TP163	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP163_0.3	AI_TP163	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP164_0.1	AI_TP164	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP164_0.4	AI_TP164	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP165_0.1	AI_TP165	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP165_0.3	AI_TP165	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP166_0.1	AI_TP166	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP166_0.3	AI_TP166	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

WPCA,Aerotropolis

Field_ID	LocCode	Sampled_Date-Time	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																																		
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																																		
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																		
NEPM (1999) Management Limits - Urban residential & open spa																																																		
NEPM (1999) HIL A - Residential (garden)							100				3000							10				6		10				300																						
NEPM (1999) HSL A Residential - Asbestos																																																		
NEPM (1999) HIL C - Recreation							120				40000							20				10		10				400																						
NEPM (1999) HSL C Recreation - Asbestos																																																		
NEPM (1999) HIL D - Commercial/Industrial							660				240000							100				50		80				2500																						
NEPM (1999) HSL D Comm/Indust - Asbestos																																																		
NEPM (1999) EIL - Urban Residential & Open Space																																																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																																		
NEPM (1999) EIL - Commercial/Industrial																																																		
NEPM (1999) ESL - Commercial/Industrial (fine)																																																		
NEPM (1999) HSL B Residential - Asbestos																																																		
AI_TP167_0.1	AI_TP167	27/10/2021	<10	<2	<1	<10	<2	<1	1.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP167_0.3	AI_TP167	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP168_0.1	AI_TP168	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP168_0.3	AI_TP168	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP169_0.1	AI_TP169	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP169_0.3	AI_TP169	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP170_0.1	AI_TP170	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP170_0.3	AI_TP170	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP171_0.1	AI_TP171	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP171_0.3	AI_TP171	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP172_0.1	AI_TP172	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP172_0.3	AI_TP172	27/10/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP173_0.1	AI_TP173	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP173_0.4	AI_TP173	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP176_0.1	AI_TP176	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP176_0.3	AI_TP176	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP177_0.1	AI_TP177	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP177_0.4	AI_TP177	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP178_0.1	AI_TP178	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP178_0.4	AI_TP178	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP179_0.1	AI_TP179	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP179_0.4	AI_TP179	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP18_0.2	AI_TP18	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP181_0.1	AI_TP181	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP181_0.3	AI_TP181	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP182_0.1	AI_TP182	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP182_0.3	AI_TP182	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP183_0.1	AI_TP183	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP183_0.3	AI_TP183	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP184_0.1	AI_TP184	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP184_0.4	AI_TP184	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP186_0.1	AI_TP186	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP186_0.3	AI_TP186	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP187_0.1	AI_TP187	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP187_0.3	AI_TP187	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP188_0.1	AI_TP188	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP188_0.3	AI_TP188	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP189_0.1	AI_TP189	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP189_0.3	AI_TP189	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP19_0.1	AI_TP19	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP19_0.3	AI_TP19	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP193_0.1	AI_TP193	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP193_0.3	AI_TP193	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP194_0.1	AI_TP194	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP194_0.3	AI_TP194	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP195_0.1	AI_TP195	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP195_0.3	AI_TP195	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP196_0.1	AI_TP196	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP196_0.3	AI_TP196	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP197_0.1	AI_TP197	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP197_0.4	AI_TP197	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP20_0.1	AI_TP20	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP20_0.4	AI_TP20	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP200_0.1	AI_TP200	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP200_0.3	AI_TP200	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP201_0.1	AI_TP201	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

WPCA,Aerotropolis

Field_ID	LocCode	Sampled_Date-Time	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																																		
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																																		
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																		
NEPM (1999) Management Limits - Urban residential & open spa																																																		
NEPM (1999) HIL A - Residential (garden)							100				3000							10				6		10				300																						
NEPM (1999) HSL A Residential - Asbestos																																																		
NEPM (1999) HIL C - Recreation							120				40000							20				10		10				400																						
NEPM (1999) HSL C Recreation - Asbestos																																																		
NEPM (1999) HIL D - Commercial/Industrial							660				240000							100				50		80				2500																						
NEPM (1999) HSL D Comm/Indust - Asbestos																																																		
NEPM (1999) EIL - Urban Residential & Open Space																																																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																																		
NEPM (1999) EIL - Commercial/Industrial																																																		
NEPM (1999) ESL - Commercial/Industrial (fine)																																																		
NEPM (1999) HSL B Residential - Asbestos																																																		
AI_TP201_0.3	AI_TP201	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP202_0.1	AI_TP202	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP202_0.3	AI_TP202	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP203_0.1	AI_TP203	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP203_0.3	AI_TP203	2/11/2021	<5	<1	<0.5	<5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP204_0.1	AI_TP204	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP204_0.3	AI_TP204	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP205_0.1	AI_TP205	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP205_0.3	AI_TP205	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP208_0.1	AI_TP208	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP208_0.3	AI_TP208	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP209_0.1	AI_TP209	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP209_0.3	AI_TP209	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP21_0.1	AI_TP21	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP21_0.3	AI_TP21	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP210_0.1	AI_TP210	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP210_0.3	AI_TP210	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP211_0.1	AI_TP211	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP211_0.3	AI_TP211	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP212_0.1	AI_TP212	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP212_0.3	AI_TP212	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP213_0.1	AI_TP213	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP213_0.3	AI_TP213	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP214_0.1	AI_TP214	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP214_0.3	AI_TP214	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP215_0.1	AI_TP215	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP215_0.3	AI_TP215	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP216_0.1	AI_TP216	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP216_0.4	AI_TP216	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP217_0.1	AI_TP217	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP217_0.3	AI_TP217	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP218_0.1	AI_TP218	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP218_0.3	AI_TP218	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP219_0.1	AI_TP219	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP219_0.3	AI_TP219	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP22_0.1	AI_TP22	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP22_0.3	AI_TP22	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP220_0.1	AI_TP220	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP220_0.3	AI_TP220	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP221_0.1	AI_TP221	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP221_0.3	AI_TP221	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP222_0.1	AI_TP222	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP222_0.3	AI_TP222	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP223_0.1	AI_TP223	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP223_0.3	AI_TP223	2/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

WPCA,Aerotropolis

Field_ID	LocCode	Sampled_Date-Time	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																																		
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																																		
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																		
NEPM (1999) Management Limits - Urban residential & open spa																																																		
NEPM (1999) HIL A - Residential (garden)							100				3000							10				6		10				300																						
NEPM (1999) HSL A Residential - Asbestos																																																		
NEPM (1999) HIL C - Recreation							120				40000							20				10		10				400																						
NEPM (1999) HSL C Recreation - Asbestos																																																		
NEPM (1999) HIL D - Commercial/Industrial							660				240000							100				50		80				2500																						
NEPM (1999) HSL D Comm/Indust - Asbestos																																																		
NEPM (1999) EIL - Urban Residential & Open Space																																																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																																		
NEPM (1999) EIL - Commercial/Industrial																																																		
NEPM (1999) ESL - Commercial/Industrial (fine)																																																		
NEPM (1999) HSL B Residential - Asbestos																																																		
AI_TP224_0.1	AI_TP224	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP224_0.3	AI_TP224	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP225_0.1	AI_TP225	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP225_0.4	AI_TP225	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP226_0.1	AI_TP226	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP226_0.3	AI_TP226	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP227_0.1	AI_TP227	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP227_0.3	AI_TP227	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP228_0.1	AI_TP228	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP228_0.3	AI_TP228	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP229_0.1	AI_TP229	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP229_0.3	AI_TP229	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP23_0.1	AI_TP23	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP23_0.4	AI_TP23	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP230_0.1	AI_TP230	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP230_0.3	AI_TP230	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP231_0.1	AI_TP231	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP231_0.3	AI_TP231	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP232_0.1	AI_TP232	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP232_0.3	AI_TP232	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP233_0.1	AI_TP233	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP233_0.3	AI_TP233	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP234_0.1	AI_TP234	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP234_0.3	AI_TP234	3/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP235_0.1	AI_TP235	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP235_0.3	AI_TP235	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP236_0.1	AI_TP236	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP236_0.3	AI_TP236	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP237_0.1	AI_TP237	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP237_0.3	AI_TP237	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP238_0.1	AI_TP238	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP238_0.3	AI_TP238	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP239_0.1	AI_TP239	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP239_0.3	AI_TP239	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP24_0.1	AI_TP24	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP24_0.3	AI_TP24	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP240_0.1	AI_TP240	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP240_0.3	AI_TP240	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP242_0.1	AI_TP242	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP242_0.3	AI_TP242	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP243_0.1	AI_TP243	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP243_0.3	AI_TP243	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP244_0.1	AI_TP244	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP244_0.3	AI_TP244	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP245_0.1	AI_TP245	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP245_0.3	AI_TP245	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP246_0.1	AI_TP246	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP246_0.3	AI_TP246	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP247_0.1	AI_TP247	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP247_0.3	AI_TP247	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP248_0.1	AI_TP248	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

WPCA,Aerotropolis

Field_ID	LocCode	Sampled_Date-Time	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																																		
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																																		
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																																		
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																		
NEPM (1999) Management Limits - Urban residential & open spa																																																		
NEPM (1999) HIL A - Residential (garden)							100				3000							10				6		10				300																						
NEPM (1999) HSL A Residential - Asbestos																																																		
NEPM (1999) HIL C - Recreation							120				40000							20				10		10				400																						
NEPM (1999) HSL C Recreation - Asbestos																																																		
NEPM (1999) HIL D - Commercial/Industrial							660				240000							100				50		80				2500																						
NEPM (1999) HSL D Comm/Indust - Asbestos																																																		
NEPM (1999) EIL - Urban Residential & Open Space																																																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																																		
NEPM (1999) EIL - Commercial/Industrial																																																		
NEPM (1999) ESL - Commercial/Industrial (fine)																																																		
NEPM (1999) HSL B Residential - Asbestos																																																		
AI_TP248_0.3	AI_TP248	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP249_0.1	AI_TP249	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP249_0.3	AI_TP249	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP25_0.1	AI_TP25	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP25_0.3	AI_TP25	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP250_0.1	AI_TP250	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP250_0.3	AI_TP250	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP251_0.1	AI_TP251	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP251_0.3	AI_TP251	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP252_0.1	AI_TP252	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP252_0.3	AI_TP252	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP253_0.1	AI_TP253	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP253_0.3	AI_TP253	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP254_0.1	AI_TP254	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP254_0.3	AI_TP254	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP255_0.1	AI_TP255	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP255_0.3	AI_TP255	1/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP263_0.1	AI_TP263	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP263_0.3	AI_TP263	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP264_0.1	AI_TP264	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP264_0.3	AI_TP264	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP265_0.1	AI_TP265	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP265_0.3	AI_TP265	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP266_0.1	AI_TP266	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP266_0.3	AI_TP266	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP267_0.1	AI_TP267	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP267_0.3	AI_TP267	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP268_0.1	AI_TP268	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP268_0.3	AI_TP268	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP269_0.1	AI_TP269	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP269_0.3	AI_TP269	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP27_0.1	AI_TP27	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP27_0.4	AI_TP27	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP270_0.1	AI_TP270	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP270_0.3	AI_TP270	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP271_0.1	AI_TP271	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP271_0.3	AI_TP271	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP272_0.1	AI_TP272	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP272_0.3	AI_TP272	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP277_0.1	AI_TP277	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP277_0.3	AI_TP277	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP278_0.1	AI_TP278	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP278_0.3	AI_TP278	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP279_0.1	AI_TP279	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP279_0.3	AI_TP279	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

WPCA,Aerotropolis

			4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																			
NEPM (1999) Management Limits - Urban residential & open spa																																																			
NEPM (1999) HIL A - Residential (garden)					100				3000								10				6		10				300																								
NEPM (1999) HSL A Residential - Asbestos																																																			
NEPM (1999) HIL C - Recreation					120				40000								20				10		10				400																								
NEPM (1999) HSL C Recreation - Asbestos																																																			
NEPM (1999) HIL D - Commercial/Industrial					660				240000								100				50		80				2500																								
NEPM (1999) HSL D Comm/Indust - Asbestos																																																			
NEPM (1999) EIL - Urban Residential & Open Space																																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																																			
NEPM (1999) EIL - Commercial/Industrial																																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																																																			
NEPM (1999) HSL B Residential - Asbestos																																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																																	
AI_TP28_0.1	AI_TP28	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP28_0.5	AI_TP28	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP280_0.1	AI_TP280	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP280_0.3	AI_TP280	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP281_0.1	AI_TP281	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP281_0.3	AI_TP281	29/10/2021	<5	<1	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP29_0.1	AI_TP29	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP29_0.3	AI_TP29	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP30_0.1	AI_TP30	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP30_0.3	AI_TP30	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP31_0.1	AI_TP31	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP31_0.3	AI_TP31	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP32_0.1	AI_TP32	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP32_0.4	AI_TP32	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP33-0.1	AI_TP33	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP34-0.1	AI_TP34	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP35-0.1	AI_TP35	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP35-0.2	AI_TP35	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP36_0.1	AI_TP36	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP36_0.4	AI_TP36	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP36-0.1	AI_TP36	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP36-0.3	AI_TP36	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP37_0.1	AI_TP37	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP37_0.4	AI_TP37	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP39_0.1	AI_TP39	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP39_0.3	AI_TP39	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP40_0.1	AI_TP40	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP40_0.3	AI_TP40	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP41_0.1	AI_TP41	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP41_0.3	AI_TP41	4/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP42_0.1	AI_TP42	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP42_0.4	AI_TP42	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP43-0.1	AI_TP43	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP43-0.3	AI_TP43	9/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP45_0.1	AI_TP45	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP45_0.3	AI_TP45	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP46_0.1	AI_TP46	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP46_0.4	AI_TP46	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP47_0.1	AI_TP47	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP47_0.4	AI_TP47	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP48_0.1	AI_TP48	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP48_0.4	AI_TP48	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.

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			4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																			
NEPM (1999) Management Limits - Urban residential & open spa																																																			
NEPM (1999) HIL A - Residential (garden)					100				3000								10				6		10				300																								
NEPM (1999) HSL A Residential - Asbestos																																																			
NEPM (1999) HIL C - Recreation					120				40000								20				10		10				400																								
NEPM (1999) HSL C Recreation - Asbestos																																																			
NEPM (1999) HIL D - Commercial/Industrial					660				240000								100				50		80				2500																								
NEPM (1999) HSL D Comm/Indust - Asbestos																																																			
NEPM (1999) EIL - Urban Residential & Open Space																																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																																			
NEPM (1999) EIL - Commercial/Industrial																																																			
NEPM (1999) ESL - Commercial/Industrial (fine)																																																			
NEPM (1999) HSL B Residential - Asbestos																																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																																	
AI_TP59_0.1	AI_TP59	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP59_0.4	AI_TP59	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP60_0.1	AI_TP60	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP60_0.5	AI_TP60	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP61_0.1	AI_TP61	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP61_0.4	AI_TP61	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP62_0.1	AI_TP62	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP62_0.4	AI_TP62	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP66_0.1	AI_TP66	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP66_0.4	AI_TP66	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP67_0.1	AI_TP67	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP67_0.4	AI_TP67	17/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP71_0.1	AI_TP71	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP71_0.4	AI_TP71	20/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP75_0.1	AI_TP75	21/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP75_0.4	AI_TP75	21/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP76_0.1	AI_TP76	21/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP76_0.4	AI_TP76	21/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP78_0.1	AI_TP78	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP78_0.3	AI_TP78	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP79_0.4	AI_TP79	21/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP80_0.4	AI_TP80	21/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP81_0.1	AI_TP81	21/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP81_0.4	AI_TP81	21/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP82_0.1	AI_TP82	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP82_0.3	AI_TP82	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP83_0.1	AI_TP83	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP83_0.3	AI_TP83	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP84_0.1	AI_TP84	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP84_0.3	AI_TP84	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP85_0.3	AI_TP85	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP86_0.1	AI_TP86	21/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP86_0.4	AI_TP86	21/12/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP88_0.1	AI_TP88	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP88_0.3	AI_TP88	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP89_0.1	AI_TP89	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

WPCA,Aerotropolis

	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	5	1	0.5	5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																																																	
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																																																	
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																																																	
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																																																	
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																																																	
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																																																	
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																	
NEPM (1999) Management Limits - Urban residential & open spa																																																	
NEPM (1999) HIL A - Residential (garden)					100				3000							10				6		10				300																							
NEPM (1999) HSL A Residential - Asbestos																																																	
NEPM (1999) HIL C - Recreation					120				40000							20				10		10				400																							
NEPM (1999) HSL C Recreation - Asbestos																																																	
NEPM (1999) HIL D - Commercial/Industrial					660				240000							100				50		80				2500																							
NEPM (1999) HSL D Comm/Indust - Asbestos																																																	
NEPM (1999) EIL - Urban Residential & Open Space																																																	
NEPM (1999) ESL - Urban Residential & Open Space (fine)																																																	
NEPM (1999) EIL - Commercial/Industrial																																																	
NEPM (1999) ESL - Commercial/Industrial (fine)																																																	
NEPM (1999) HSL B Residential - Asbestos																																																	

Field_ID	LocCode	Sampled_Date-Time																																																
AI_TP89_0.3	AI_TP89	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP90_0.1	AI_TP90	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP90_0.3	AI_TP90	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP91_0.1	AI_TP91	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP91_0.3	AI_TP91	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP92_0.3	AI_TP92	15/11/2021	<5	<1	<1	<5	<1	<1	5.6	<1	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP92_0.5	AI_TP92	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP93_0.3	AI_TP93	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP93_0.1	AI_TP93	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP94_0.3	AI_TP94	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP94_0.1	AI_TP94	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP95_0.3	AI_TP95	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP95_0.1	AI_TP95	8/11/2021	<5	<1	<0.5	<5	<1	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP96_0.1	AI_TP96	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP96_0.3	AI_TP96	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP98_0.1	AI_TP98	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP98_0.3	AI_TP98	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP99_0.3	AI_TP99	15/11/2021	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Statistical Summary

Number of Results	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466
Number of Detects	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<5	<1	<0.5	<5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Minimum Detect	ND	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<10	<2	<1	<10	<5	<1	5.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Detect	ND	ND	ND	ND	ND	ND	5.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	2.5	0.5	0.25	2.5	0.67	0.25	0.28	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Median Concentration	2.5	0.5	0.25	2.5	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation	0.12	0.023	0.016	0.12	0.52	0.016	0.3	0.016	0.012	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.012	0.016	0.016	0.016	0.016	0.016	0.016	0	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WPCA,Aerotropolis

			VOC															
Field_ID	LocCode	Sampled_Date-Time	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m													0.7					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m													1					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m													NL					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m													NL					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m													4					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m													6					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																		
NEPM (1999) Management Limits - Urban residential & open spa																		
NEPM (1999) HIL A - Residential (garden)																		
NEPM (1999) HSL A Residential - Asbestos																		
NEPM (1999) HIL C - Recreation																		
NEPM (1999) HSL C Recreation - Asbestos																		
NEPM (1999) HIL D - Commercial/Industrial																		
NEPM (1999) HSL D Comm/Indust - Asbestos																		
NEPM (1999) EIL - Urban Residential & Open Space																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)													65					
NEPM (1999) EIL - Commercial/Industrial																		
NEPM (1999) ESL - Commercial/Industrial (fine)													95					
NEPM (1999) HSL B Residential - Asbestos																		
A1_TP128_0.1	A1_TP128	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP128_0.3	A1_TP128	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP129_0.1	A1_TP129	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP129_0.3	A1_TP129	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP130_0.1	A1_TP130	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP130_0.3	A1_TP130	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP131_0.1	A1_TP131	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP131_0.3	A1_TP131	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP153_0.1	A1_TP153	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP153_0.3	A1_TP153	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP159_0.3	A1_TP159	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP256_0.1	A1_TP256	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP256_0.3	A1_TP256	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP257_0.1	A1_TP257	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP257_0.3	A1_TP257	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP258_0.1	A1_TP258	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP258_0.3	A1_TP258	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP259_0.1	A1_TP259	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP259_0.3	A1_TP259	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP260_0.1	A1_TP260	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP260_0.3	A1_TP260	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP262_0.1	A1_TP262	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP262_0.3	A1_TP262	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP303_0.1	A1_TP303	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP303_0.3	A1_TP303	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5

	VOC																
Field_ID	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																	
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																	
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																	
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																	
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																	
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																	
NEPM (1999) Management Limits - Commercial/Industrial (fine)																	
NEPM (1999) Management Limits - Urban residential & open spa																	
NEPM (1999) HIL A - Residential (garden)																	
NEPM (1999) HSL A Residential - Asbestos																	
NEPM (1999) HIL C - Recreation																	
NEPM (1999) HSL C Recreation - Asbestos																	
NEPM (1999) HIL D - Commercial/Industrial																	
NEPM (1999) HSL D Comm/Indust - Asbestos																	
NEPM (1999) EIL - Urban Residential & Open Space																	
NEPM (1999) ESL - Urban Residential & Open Space (fine)																	
NEPM (1999) EIL - Commercial/Industrial																	
NEPM (1999) ESL - Commercial/Industrial (fine)																	
NEPM (1999) HSL B Residential - Asbestos																	
A1_TP128_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP128_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP129_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP129_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP130_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP130_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP131_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP131_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP153_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP153_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP159_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP256_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP256_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP257_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP257_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP258_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP258_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP259_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP259_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP260_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP260_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP262_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP262_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP303_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1_TP303_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

	VOC									Volatile					
Field_ID	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m	480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m	NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m	NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m	NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m	NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m	NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)															
NEPM (1999) Management Limits - Urban residential & open spa															
NEPM (1999) HIL A - Residential (garden)															
NEPM (1999) HSL A Residential - Asbestos															
NEPM (1999) HIL C - Recreation															
NEPM (1999) HSL C Recreation - Asbestos															
NEPM (1999) HIL D - Commercial/Industrial															
NEPM (1999) HSL D Comm/Indust - Asbestos															
NEPM (1999) EIL - Urban Residential & Open Space															
NEPM (1999) ESL - Urban Residential & Open Space (fine)	105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial															
NEPM (1999) ESL - Commercial/Industrial (fine)	135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos															
A1_TP128_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP128_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP129_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP129_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP130_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP130_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP131_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP131_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP153_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP153_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP159_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP256_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP256_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP257_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP257_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP258_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP258_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP259_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP259_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP260_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP260_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP262_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP262_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP303_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP303_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

WPCA,Aerotropolis

			VOC																																										Volatile					
			1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m													0.7																							480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m													1																							NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m													NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m													NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m													4																							NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m													6																							NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																		
NEPM (1999) Management Limits - Urban residential & open spa																																																		
NEPM (1999) HIL A - Residential (garden)																																																		
NEPM (1999) HSL A Residential - Asbestos																																																		
NEPM (1999) HIL C - Recreation																																																		
NEPM (1999) HSL C Recreation - Asbestos																																																		
NEPM (1999) HIL D - Commercial/Industrial																																																		
NEPM (1999) HSL D Comm/Indust - Asbestos																																																		
NEPM (1999) EIL - Urban Residential & Open Space																																																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)													65																							105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial																																																		
NEPM (1999) ESL - Commercial/Industrial (fine)													95																							135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																		
Field_ID	**LocCode**	**Sampled_Date-Time**																																																
A1_TP305_0.1	A1_TP305	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP305_0.3	A1_TP305	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP315_0.1	A1_TP315	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP315_0.3	A1_TP315	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP36_0.1	A1_TP36	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A1_TP36_0.3	A1_TP36	16/06/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP02-0.1	AI_TP02	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP02-0.3	AI_TP02	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP03-0.1	AI_TP03	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP03-0.3	AI_TP03	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP05_0.1	AI_TP05	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP05_0.3	AI_TP05	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP06_0.3	AI_TP06	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP06_0.1	AI_TP06	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP08_0.1	AI_TP08	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP08_0.3	AI_TP08	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP09_0.1	AI_TP09	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP09_0.4	AI_TP09	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP100_0.1	AI_TP100	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP100_0.3	AI_TP100	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP101_0.1	AI_TP101	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP101_0.3	AI_TP101	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP102_0.3	AI_TP102	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP102_0.1	AI_TP102	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP103_0.3	AI_TP103	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP103_0.1	AI_TP103	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP104_0.3	AI_TP104	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP104_0.1	AI_TP104	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP105_0.1	AI_TP105	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP105_0.4	AI_TP105	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP107_0.1	AI_TP107	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP107_0.3	AI_TP107	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP108_0.1	AI_TP108	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP108_0.5	AI_TP108	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP109_0.1	AI_TP109	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP109_0.3	AI_TP109	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP11-0.1	AI_TP11	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP110_0.1	AI_TP110	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP110_0.3	AI_TP110	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP111_0.3	AI_TP111	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP111_0.1	AI_TP111	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP112_0.3	AI_TP112	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP112_0.1	AI_TP112	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP113_0.3	AI_TP113	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP113_0.1	AI_TP113	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

			VOC																																								Volatile					
			1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m													0.7																											480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m													1																											NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m													NL																											NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m													NL																											NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m													4																											NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m													6																											NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																			
NEPM (1999) Management Limits - Urban residential & open spa																																																			
NEPM (1999) HIL A - Residential (garden)																																																			
NEPM (1999) HSL A Residential - Asbestos																																																			
NEPM (1999) HIL C - Recreation																																																			
NEPM (1999) HSL C Recreation - Asbestos																																																			
NEPM (1999) HIL D - Commercial/Industrial																																																			
NEPM (1999) HSL D Comm/Indust - Asbestos																																																			
NEPM (1999) EIL - Urban Residential & Open Space																																																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)													65																											105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial																																																			
NEPM (1999) ESL - Commercial/Industrial (fine)													95																											135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																			
Field_ID	**LocCode**	**Sampled_Date-Time**																																																
AI_TP115_0.1	AI_TP115	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP115_0.3	AI_TP115	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP116_0.1	AI_TP116	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP117_0.1	AI_TP117	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP117_0.2	AI_TP117	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP118_0.1	AI_TP118	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP118_0.2	AI_TP118	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP119_0.3	AI_TP119	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP119_0.1	AI_TP119	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP12_0.1	AI_TP12	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP12_0.3	AI_TP12	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP120_0.3	AI_TP120	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP120_0.1	AI_TP120	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP121_0.3	AI_TP121	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP121_0.1	AI_TP121	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP122_0.3	AI_TP122	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP122_0.1	AI_TP122	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP123_0.3	AI_TP123	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP123_0.1	AI_TP123	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP124_0.3	AI_TP124	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP124_0.1	AI_TP124	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP125_0.3	AI_TP125	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP125_0.1	AI_TP125	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP126_0.3	AI_TP126	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP126_0.1	AI_TP126	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP127_0.3	AI_TP127	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP127_0.1	AI_TP127	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP13_0.1	AI_TP13	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP13_0.3	AI_TP13	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP132_0.1	AI_TP132	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP132_0.3	AI_TP132	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP133_0.1	AI_TP133	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP133_0.3	AI_TP133	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP134_0.1	AI_TP134	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP134_0.3	AI_TP134	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP135_0.1	AI_TP135	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP135_0.3	AI_TP135	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP136_0.1	AI_TP136	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP136_0.3	AI_TP136	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP137_0.1	AI_TP137	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP137_0.3	AI_TP137	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

WPCA,Aerotropolis

ERM

			VOC																																										Volatile					
			1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m													0.7																							480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m													1																							NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m													NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m													NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m													4																							NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m													6																							NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																		
NEPM (1999) Management Limits - Urban residential & open spa																																																		
NEPM (1999) HIL A - Residential (garden)																																																		
NEPM (1999) HSL A Residential - Asbestos																																																		
NEPM (1999) HIL C - Recreation																																																		
NEPM (1999) HSL C Recreation - Asbestos																																																		
NEPM (1999) HIL D - Commercial/Industrial																																																		
NEPM (1999) HSL D Comm/Indust - Asbestos																																																		
NEPM (1999) EIL - Urban Residential & Open Space																																																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)													65																							105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial																																																		
NEPM (1999) ESL - Commercial/Industrial (fine)													95																							135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																		
Field_ID	LocCode	Sampled_Date-Time																																																
AI_TP138_0.1	AI_TP138	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP138_0.3	AI_TP138	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP139_0.1	AI_TP139	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP139_0.3	AI_TP139	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP14_0.1	AI_TP14	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP14_0.4	AI_TP14	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP140_0.1	AI_TP140	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP140_0.3	AI_TP140	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP141_0.1	AI_TP141	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP141_0.3	AI_TP141	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP142_0.3	AI_TP142	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP142_0.1	AI_TP142	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP143_0.3	AI_TP143	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP143_0.1	AI_TP143	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP144_0.2	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP144_0.1	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP144_0.2	AI_TP144	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP145_0.3	AI_TP145	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP145_0.1	AI_TP145	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP146_0.3	AI_TP146	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP146_0.1	AI_TP146	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP147_0.3	AI_TP147	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP147_0.1	AI_TP147	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP148_0.3	AI_TP148	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP148_0.1	AI_TP148	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP149_0.3	AI_TP149	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP149_0.1	AI_TP149	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP15-0.1	AI_TP15	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP15-0.3	AI_TP15	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP150_0.1	AI_TP150	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP150_0.3	AI_TP150	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP151_0.1	AI_TP151	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP151_0.3	AI_TP151	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP152_0.1	AI_TP152	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP152_0.3	AI_TP152	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP158_0.1	AI_TP158	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP158_0.3	AI_TP158	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP16_0.1	AI_TP16	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP16_0.3	AI_TP16	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP160_0.3	AI_TP160	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP163_0.1	AI_TP163	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP163_0.3	AI_TP163	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP164_0.1	AI_TP164	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP164_0.4	AI_TP164	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP165_0.1	AI_TP165	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP165_0.3	AI_TP165	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP166_0.1	AI_TP166	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP166_0.3	AI_TP166	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

WPCA,Aerotropolis

			VOC																																										Volatile					
			1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m													0.7																							480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m													1																							NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m													NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m													NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m													4																							NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m													6																							NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																		
NEPM (1999) Management Limits - Urban residential & open spa																																																		
NEPM (1999) HIL A - Residential (garden)																																																		
NEPM (1999) HSL A Residential - Asbestos																																																		
NEPM (1999) HIL C - Recreation																																																		
NEPM (1999) HSL C Recreation - Asbestos																																																		
NEPM (1999) HIL D - Commercial/Industrial																																																		
NEPM (1999) HSL D Comm/Indust - Asbestos																																																		
NEPM (1999) EIL - Urban Residential & Open Space																																																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)													65																							105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial																																																		
NEPM (1999) ESL - Commercial/Industrial (fine)													95																							135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																		
Field_ID	LocCode	Sampled_Date-Time																																															
AI_TP167_0.1	AI_TP167	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP167_0.3	AI_TP167	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP168_0.1	AI_TP168	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP168_0.3	AI_TP168	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP169_0.1	AI_TP169	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP169_0.3	AI_TP169	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP170_0.1	AI_TP170	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP170_0.3	AI_TP170	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP171_0.1	AI_TP171	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP171_0.3	AI_TP171	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP172_0.1	AI_TP172	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP172_0.3	AI_TP172	27/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP173_0.1	AI_TP173	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP173_0.4	AI_TP173	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP176_0.1	AI_TP176	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP176_0.3	AI_TP176	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP177_0.1	AI_TP177	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP177_0.4	AI_TP177	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP178_0.1	AI_TP178	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP178_0.4	AI_TP178	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP179_0.1	AI_TP179	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP179_0.4	AI_TP179	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP18_0.2	AI_TP18	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP181_0.1	AI_TP181	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP181_0.3	AI_TP181	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP182_0.1	AI_TP182	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP182_0.3	AI_TP182	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP183_0.1	AI_TP183	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP183_0.3	AI_TP183	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP184_0.1	AI_TP184	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP184_0.4	AI_TP184	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP186_0.1	AI_TP186	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP186_0.3	AI_TP186	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	-	<0.1	<0.2	<0.1	-
AI_TP187_0.1	AI_TP187	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP187_0.3	AI_TP187	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.2	-	<0.3	<0.1	-	<0.1	-	<0.1	-
AI_TP188_0.1	AI_TP188	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	-	<0.1	<0.2	<0.1	-
AI_TP188_0.3	AI_TP188	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	-	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.3	<0.1	-	<0.1	<0.2	-	-
AI_TP189_0.1	AI_TP189	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP189_0.3	AI_TP189	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP19_0.1	AI_TP19	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP19_0.3	AI_TP19	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP193_0.1	AI_TP193	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP193_0.3	AI_TP193	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP194_0.1	AI_TP194	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP194_0.3	AI_TP194	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP195_0.1	AI_TP195	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP195_0.3	AI_TP195	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP196_0.1	AI_TP196	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP196_0.3	AI_TP196	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP197_0.1	AI_TP197	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP197_0.4	AI_TP197	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP20_0.1	AI_TP20	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP20_0.4	AI_TP20	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP200_0.1	AI_TP200	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP200_0.3	AI_TP200	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP201_0.1	AI_TP201	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

WPCA,Aerotropolis

Field_ID	LocCode	Sampled_Date-Time	VOC															
			1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m													0.7					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m													1					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m													NL					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m													NL					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m													4					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m													6					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																		
NEPM (1999) Management Limits - Urban residential & open spa																		
NEPM (1999) HIL A - Residential (garden)																		
NEPM (1999) HSL A Residential - Asbestos																		
NEPM (1999) HIL C - Recreation																		
NEPM (1999) HSL C Recreation - Asbestos																		
NEPM (1999) HIL D - Commercial/Industrial																		
NEPM (1999) HSL D Comm/Indust - Asbestos																		
NEPM (1999) EIL - Urban Residential & Open Space																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)													65					
NEPM (1999) EIL - Commercial/Industrial																		
NEPM (1999) ESL - Commercial/Industrial (fine)													95					
NEPM (1999) HSL B Residential - Asbestos																		
AI_TP201_0.3	AI_TP201	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP202_0.1	AI_TP202	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP202_0.3	AI_TP202	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP203_0.1	AI_TP203	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP203_0.3	AI_TP203	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP204_0.1	AI_TP204	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP204_0.3	AI_TP204	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP205_0.1	AI_TP205	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP205_0.3	AI_TP205	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP208_0.1	AI_TP208	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP208_0.3	AI_TP208	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP209_0.1	AI_TP209	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP209_0.3	AI_TP209	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP21_0.1	AI_TP21	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP21_0.3	AI_TP21	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP210_0.1	AI_TP210	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP210_0.3	AI_TP210	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP211_0.1	AI_TP211	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP211_0.3	AI_TP211	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP212_0.1	AI_TP212	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP212_0.3	AI_TP212	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP213_0.1	AI_TP213	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP213_0.3	AI_TP213	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP214_0.1	AI_TP214	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP214_0.3	AI_TP214	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP215_0.1	AI_TP215	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP215_0.3	AI_TP215	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP216_0.1	AI_TP216	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP216_0.4	AI_TP216	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP217_0.1	AI_TP217	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP217_0.3	AI_TP217	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP218_0.1	AI_TP218	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP218_0.3	AI_TP218	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP219_0.1	AI_TP219	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP219_0.3	AI_TP219	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP22_0.1	AI_TP22	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP22_0.3	AI_TP22	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP220_0.1	AI_TP220	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP220_0.3	AI_TP220	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP221_0.1	AI_TP221	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP221_0.3	AI_TP221	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP222_0.1	AI_TP222	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP222_0.3	AI_TP222	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP223_0.1	AI_TP223	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP223_0.3	AI_TP223	2/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5

Field_ID	VOC																
	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																	
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																	
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																	
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																	
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																	
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																	
NEPM (1999) Management Limits - Commercial/Industrial (fine)																	
NEPM (1999) Management Limits - Urban residential & open spa																	
NEPM (1999) HIL A - Residential (garden)																	
NEPM (1999) HSL A Residential - Asbestos																	
NEPM (1999) HIL C - Recreation																	
NEPM (1999) HSL C Recreation - Asbestos																	
NEPM (1999) HIL D - Commercial/Industrial																	
NEPM (1999) HSL D Comm/Indust - Asbestos																	
NEPM (1999) EIL - Urban Residential & Open Space																	
NEPM (1999) ESL - Urban Residential & Open Space (fine)																	
NEPM (1999) EIL - Commercial/Industrial																	
NEPM (1999) ESL - Commercial/Industrial (fine)																	
NEPM (1999) HSL B Residential - Asbestos																	
AI_TP201_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP202_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP202_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP203_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP203_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP204_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP204_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP205_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP205_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP208_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP208_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP209_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP209_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP21_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP21_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP210_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP210_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP211_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP211_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP212_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP212_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP213_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP213_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP214_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP214_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP215_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP215_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP216_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP216_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP217_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP217_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP218_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP218_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP219_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP219_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP22_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP22_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP220_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP220_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP221_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP221_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP222_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP222_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP223_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP223_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Field_ID	VOC									Volatile					
	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m	480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m	NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m	NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m	NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m	NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m	NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)															
NEPM (1999) Management Limits - Urban residential & open spa															
NEPM (1999) HIL A - Residential (garden)															
NEPM (1999) HSL A Residential - Asbestos															
NEPM (1999) HIL C - Recreation															
NEPM (1999) HSL C Recreation - Asbestos															
NEPM (1999) HIL D - Commercial/Industrial															
NEPM (1999) HSL D Comm/Indust - Asbestos															
NEPM (1999) EIL - Urban Residential & Open Space															
NEPM (1999) ESL - Urban Residential & Open Space (fine)	105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial															
NEPM (1999) ESL - Commercial/Industrial (fine)	135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos															
AI_TP201_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP202_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP202_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP203_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP203_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP204_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP204_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP205_0.1	<0.1	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	-	<0.1	<0.2	<0.1	-
AI_TP205_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP208_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP208_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP209_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP209_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP21_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP21_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP210_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP210_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP211_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP211_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP212_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP212_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP213_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP213_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP214_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP214_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP215_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP215_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP216_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP216_0.4	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP217_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP217_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP218_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP218_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP219_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP219_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP22_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP22_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP220_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP220_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP221_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP221_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP222_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP222_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP223_0.1	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP223_0.3	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

			VOC																																										Volatile					
			1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m													0.7																							480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m													1																							NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m													NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m													NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m													4																							NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m													6																							NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																		
NEPM (1999) Management Limits - Urban residential & open spa																																																		
NEPM (1999) HIL A - Residential (garden)																																																		
NEPM (1999) HSL A Residential - Asbestos																																																		
NEPM (1999) HIL C - Recreation																																																		
NEPM (1999) HSL C Recreation - Asbestos																																																		
NEPM (1999) HIL D - Commercial/Industrial																																																		
NEPM (1999) HSL D Comm/Indust - Asbestos																																																		
NEPM (1999) EIL - Urban Residential & Open Space																																																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)													65																							105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial																																																		
NEPM (1999) ESL - Commercial/Industrial (fine)													95																							135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																		
Field_ID	LocCode	Sampled_Date-Time																																																
AI_TP224_0.1	AI_TP224	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP224_0.3	AI_TP224	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	-	<0.1	<0.2	<0.1	-
AI_TP225_0.1	AI_TP225	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP225_0.4	AI_TP225	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP226_0.1	AI_TP226	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.2	-	<0.3	-	<0.1	<0.1	-	<0.1	-
AI_TP226_0.3	AI_TP226	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP227_0.1	AI_TP227	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	-	<0.1	<0.2	<0.1	-
AI_TP227_0.3	AI_TP227	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	-	<0.1	<0.2	<0.1	-
AI_TP228_0.1	AI_TP228	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP228_0.3	AI_TP228	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP229_0.1	AI_TP229	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP229_0.3	AI_TP229	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.2	-	<0.3	<0.1	<0.1	<0.1	-	<0.1	-
AI_TP23_0.1	AI_TP23	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP23_0.4	AI_TP23	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP230_0.1	AI_TP230	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP230_0.3	AI_TP230	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP231_0.1	AI_TP231	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	<0.1	<0.1	<0.2	<0.1	-
AI_TP231_0.3	AI_TP231	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP232_0.1	AI_TP232	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP232_0.3	AI_TP232	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	-	<0.1	<0.2	<0.1	-
AI_TP233_0.1	AI_TP233	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	-	-	<0.2	<0.1	-
AI_TP233_0.3	AI_TP233	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP234_0.1	AI_TP234	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	<0.1	-	<0.1	<0.2	<0.1	-
AI_TP234_0.3	AI_TP234	3/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.3	-	<0.1	<0.1	<0.2	<0.1	-
AI_TP235_0.1	AI_TP235	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP235_0.3	AI_TP235	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP236_0.1	AI_TP236	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP236_0.3	AI_TP236	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP237_0.1	AI_TP237	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP237_0.3	AI_TP237	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP238_0.1	AI_TP238	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP238_0.3	AI_TP238	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP239_0.1	AI_TP239	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP239_0.3	AI_TP239	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP24_0.1	AI_TP24	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP24_0.3	AI_TP24	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP240_0.1	AI_TP240	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP240_0.3	AI_TP240	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP242_0.1	AI_TP242	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP242_0.3	AI_TP242	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP243_0.1	AI_TP243	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP243_0.3	AI_TP243	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP244_0.1	AI_TP244	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP244_0.3	AI_TP244	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP245_0.1	AI_TP245	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP245_0.3	AI_TP245	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP246_0.1	AI_TP246	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP246_0.3	AI_TP246	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP247_0.1	AI_TP247	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP247_0.3	AI_TP247	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP248_0.1	AI_TP248	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

WPCA,Aerotropolis

ERM

Field_ID	LocCode	Sampled_Date-Time	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane
			VOC															
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m													0.7					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m													1					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m													NL					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m													NL					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m													4					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m													6					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																		
NEPM (1999) Management Limits - Urban residential & open spa																		
NEPM (1999) HIL A - Residential (garden)																		
NEPM (1999) HSL A Residential - Asbestos																		
NEPM (1999) HIL C - Recreation																		
NEPM (1999) HSL C Recreation - Asbestos																		
NEPM (1999) HIL D - Commercial/Industrial																		
NEPM (1999) HSL D Comm/Indust - Asbestos																		
NEPM (1999) EIL - Urban Residential & Open Space																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)													65					
NEPM (1999) EIL - Commercial/Industrial																		
NEPM (1999) ESL - Commercial/Industrial (fine)													95					
NEPM (1999) HSL B Residential - Asbestos																		
AI_TP248_0.3	AI_TP248	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP249_0.1	AI_TP249	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP249_0.3	AI_TP249	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP25_0.1	AI_TP25	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP25_0.3	AI_TP25	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP250_0.1	AI_TP250	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP250_0.3	AI_TP250	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP251_0.1	AI_TP251	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP251_0.3	AI_TP251	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP252_0.1	AI_TP252	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP252_0.3	AI_TP252	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP253_0.1	AI_TP253	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP253_0.3	AI_TP253	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP254_0.1	AI_TP254	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP254_0.3	AI_TP254	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP255_0.1	AI_TP255	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP255_0.3	AI_TP255	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP263_0.1	AI_TP263	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP263_0.3	AI_TP263	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP264_0.1	AI_TP264	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP264_0.3	AI_TP264	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP265_0.1	AI_TP265	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP265_0.3	AI_TP265	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP266_0.1	AI_TP266	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP266_0.3	AI_TP266	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP267_0.1	AI_TP267	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP267_0.3	AI_TP267	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP268_0.1	AI_TP268	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP268_0.3	AI_TP268	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP269_0.1	AI_TP269	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP269_0.3	AI_TP269	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP27_0.1	AI_TP27	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP27_0.4	AI_TP27	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP270_0.1	AI_TP270	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP270_0.3	AI_TP270	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP271_0.1	AI_TP271	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP271_0.3	AI_TP271	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP272_0.1	AI_TP272	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP272_0.3	AI_TP272	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP277_0.1	AI_TP277	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP277_0.3	AI_TP277	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP278_0.1	AI_TP278	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP278_0.3	AI_TP278	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP279_0.1	AI_TP279	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP279_0.3	AI_TP279	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5

Field_ID	LocCode	Sampled_Date-Time	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene
			VOC																
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																			
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																			
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																			
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																			
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																			
NEPM (1999) Management Limits - Commercial/Industrial (fine)																			
NEPM (1999) Management Limits - Urban residential & open spa																			
NEPM (1999) HIL A - Residential (garden)																			
NEPM (1999) HSL A Residential - Asbestos																			
NEPM (1999) HIL C - Recreation																			
NEPM (1999) HSL C Recreation - Asbestos																			
NEPM (1999) HIL D - Commercial/Industrial																			
NEPM (1999) HSL D Comm/Indust - Asbestos																			
NEPM (1999) EIL - Urban Residential & Open Space																			
NEPM (1999) ESL - Urban Residential & Open Space (fine)																			
NEPM (1999) EIL - Commercial/Industrial																			
NEPM (1999) ESL - Commercial/Industrial (fine)																			
NEPM (1999) HSL B Residential - Asbestos																			
AI_TP248_0.3	AI_TP248	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP249_0.1	AI_TP249	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP249_0.3	AI_TP249	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP25_0.1	AI_TP25	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP25_0.3	AI_TP25	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP250_0.1	AI_TP250	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP250_0.3	AI_TP250	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP251_0.1	AI_TP251	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP251_0.3	AI_TP251	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP252_0.1	AI_TP252	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP252_0.3	AI_TP252	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP253_0.1	AI_TP253	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP253_0.3	AI_TP253	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP254_0.1	AI_TP254	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP254_0.3	AI_TP254	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP255_0.1	AI_TP255	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP255_0.3	AI_TP255	1/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP263_0.1	AI_TP263	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP263_0.3	AI_TP263	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP264_0.1	AI_TP264	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP264_0.3	AI_TP264	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP265_0.1	AI_TP265	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP265_0.3	AI_TP265	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP266_0.1	AI_TP266	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP266_0.3	AI_TP266	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP267_0.1	AI_TP267	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP267_0.3	AI_TP267	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP268_0.1	AI_TP268	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP268_0.3	AI_TP268	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP269_0.1	AI_TP269	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP269_0.3	AI_TP269	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP27_0.1	AI_TP27	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP27_0.4	AI_TP27	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP270_0.1	AI_TP270	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP270_0.3	AI_TP270	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP271_0.1	AI_TP271	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP271_0.3	AI_TP271	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP272_0.1	AI_TP272	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP272_0.3	AI_TP272	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP277_0.1	AI_TP277	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP277_0.3	AI_TP277	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP278_0.1	AI_TP278	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP278_0.3	AI_TP278	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP279_0.1	AI_TP279	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP279_0.3	AI_TP279	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Field_ID	LocCode	Sampled_Date-Time	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			VOC									Volatile					
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m			480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m			NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m			NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m			NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m			NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m			NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)																	
NEPM (1999) Management Limits - Urban residential & open spa																	
NEPM (1999) HIL A - Residential (garden)																	
NEPM (1999) HSL A Residential - Asbestos																	
NEPM (1999) HIL C - Recreation																	
NEPM (1999) HSL C Recreation - Asbestos																	
NEPM (1999) HIL D - Commercial/Industrial																	
NEPM (1999) HSL D Comm/Indust - Asbestos																	
NEPM (1999) EIL - Urban Residential & Open Space																	
NEPM (1999) ESL - Urban Residential & Open Space (fine)			105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial																	
NEPM (1999) ESL - Commercial/Industrial (fine)			135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																	
AI_TP248_0.3	AI_TP248	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP249_0.1	AI_TP249	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP249_0.3	AI_TP249	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP25_0.1	AI_TP25	17/12/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP25_0.3	AI_TP25	17/12/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP250_0.1	AI_TP250	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP250_0.3	AI_TP250	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP251_0.1	AI_TP251	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP251_0.3	AI_TP251	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP252_0.1	AI_TP252	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP252_0.3	AI_TP252	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP253_0.1	AI_TP253	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP253_0.3	AI_TP253	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP254_0.1	AI_TP254	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP254_0.3	AI_TP254	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP255_0.1	AI_TP255	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP255_0.3	AI_TP255	1/11/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP263_0.1	AI_TP263	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP263_0.3	AI_TP263	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP264_0.1	AI_TP264	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP264_0.3	AI_TP264	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP265_0.1	AI_TP265	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP265_0.3	AI_TP265	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP266_0.1	AI_TP266	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP266_0.3	AI_TP266	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP267_0.1	AI_TP267	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP267_0.3	AI_TP267	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP268_0.1	AI_TP268	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP268_0.3	AI_TP268	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP269_0.1	AI_TP269	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP269_0.3	AI_TP269	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP27_0.1	AI_TP27	20/12/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP27_0.4	AI_TP27	20/12/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP270_0.1	AI_TP270	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP270_0.3	AI_TP270	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP271_0.1	AI_TP271	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP271_0.3	AI_TP271	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP272_0.1	AI_TP272	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP272_0.3	AI_TP272	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP277_0.1	AI_TP277	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP277_0.3	AI_TP277	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP278_0.1	AI_TP278	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP278_0.3	AI_TP278	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP279_0.1	AI_TP279	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP279_0.3	AI_TP279	29/10/2021	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

WPCA,Aerotropolis

			VOC																																										Volatile					
			1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m													0.7																							480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m													1																							NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m													NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m													NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m													4																							NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m													6																							NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																		
NEPM (1999) Management Limits - Urban residential & open spa																																																		
NEPM (1999) HIL A - Residential (garden)																																																		
NEPM (1999) HSL A Residential - Asbestos																																																		
NEPM (1999) HIL C - Recreation																																																		
NEPM (1999) HSL C Recreation - Asbestos																																																			
NEPM (1999) HIL D - Commercial/Industrial																																																		
NEPM (1999) HSL D Comm/Indust - Asbestos																																																		
NEPM (1999) EIL - Urban Residential & Open Space																																																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)													65																							105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial																																																		
NEPM (1999) ESL - Commercial/Industrial (fine)													95																							135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																		
Field_ID	**LocCode**	**Sampled_Date-Time**																																																
AI_TP28_0.1	AI_TP28	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP28_0.5	AI_TP28	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP280_0.1	AI_TP280	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP280_0.3	AI_TP280	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP281_0.1	AI_TP281	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP281_0.3	AI_TP281	29/10/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP29_0.1	AI_TP29	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP29_0.3	AI_TP29	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP30_0.1	AI_TP30	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP30_0.3	AI_TP30	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP31_0.1	AI_TP31	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP31_0.3	AI_TP31	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP32_0.1	AI_TP32	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP32_0.4	AI_TP32	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP33-0.1	AI_TP33	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP34-0.1	AI_TP34	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP35-0.1	AI_TP35	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP35-0.2	AI_TP35	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP36_0.1	AI_TP36	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP36_0.4	AI_TP36	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP36-0.1	AI_TP36	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP36-0.3	AI_TP36	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP37_0.1	AI_TP37	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP37_0.4	AI_TP37	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP39_0.1	AI_TP39	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP39_0.3	AI_TP39	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP40_0.1	AI_TP40	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP40_0.3	AI_TP40	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP41_0.1	AI_TP41	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP41_0.3	AI_TP41	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP42_0.1	AI_TP42	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP42_0.4	AI_TP42	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP43-0.1	AI_TP43	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP43-0.3	AI_TP43	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP45_0.1	AI_TP45	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP45_0.3	AI_TP45	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP46_0.1	AI_TP46	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP46_0.4	AI_TP46	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP47_0.1	AI_TP47	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP47_0.4	AI_TP47	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP48_0.1	AI_TP48	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP48_0.4	AI_TP48	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP49_0.1	AI_TP49	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP49_0.3	AI_TP49	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP50_0.1	AI_TP50	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP50_0.3	AI_TP50	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP51_0.1	AI_TP51	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP51_0.3	AI_TP51	4/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP54-0.1	AI_TP54	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP54-0.3	AI_TP54	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP55-0.1	AI_TP55	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP55-0.3	AI_TP55	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP56-0.1	AI_TP56	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP56-0.3	AI_TP56	9/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP58_0.1	AI_TP58	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP58_0.4	AI_TP58	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

WPCA,Aerotropolis

			VOC															
			1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m													0.7					
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m													1					
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m													NL					
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m													NL					
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m													4					
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m													6					
NEPM (1999) Management Limits - Commercial/Industrial (fine)																		
NEPM (1999) Management Limits - Urban residential & open spa																		
NEPM (1999) HIL A - Residential (garden)																		
NEPM (1999) HSL A Residential - Asbestos																		
NEPM (1999) HIL C - Recreation																		
NEPM (1999) HSL C Recreation - Asbestos																		
NEPM (1999) HIL D - Commercial/Industrial																		
NEPM (1999) HSL D Comm/Indust - Asbestos																		
NEPM (1999) EIL - Urban Residential & Open Space																		
NEPM (1999) ESL - Urban Residential & Open Space (fine)													65					
NEPM (1999) EIL - Commercial/Industrial																		
NEPM (1999) ESL - Commercial/Industrial (fine)													95					
NEPM (1999) HSL B Residential - Asbestos																		
Field_ID	LocCode	Sampled_Date-Time																
AI_TP59_0.1	AI_TP59	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP59_0.4	AI_TP59	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP60_0.1	AI_TP60	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP60_0.5	AI_TP60	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP61_0.1	AI_TP61	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP61_0.4	AI_TP61	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP62_0.1	AI_TP62	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP62_0.4	AI_TP62	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP66_0.1	AI_TP66	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP66_0.4	AI_TP66	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP67_0.1	AI_TP67	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP67_0.4	AI_TP67	17/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP71_0.1	AI_TP71	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP71_0.4	AI_TP71	20/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP75_0.1	AI_TP75	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP75_0.4	AI_TP75	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP76_0.1	AI_TP76	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP76_0.4	AI_TP76	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP78_0.1	AI_TP78	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP78_0.3	AI_TP78	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP79_0.4	AI_TP79	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP80_0.4	AI_TP80	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP81_0.1	AI_TP81	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP81_0.4	AI_TP81	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP82_0.1	AI_TP82	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP82_0.3	AI_TP82	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP83_0.1	AI_TP83	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP83_0.3	AI_TP83	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP84_0.1	AI_TP84	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP84_0.3	AI_TP84	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP85_0.3	AI_TP85	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP86_0.1	AI_TP86	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP86_0.4	AI_TP86	21/12/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP88_0.1	AI_TP88	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP88_0.3	AI_TP88	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP89_0.1	AI_TP89	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5

	VOC															
	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																
NEPM (1999) Management Limits - Commercial/Industrial (fine)																
NEPM (1999) Management Limits - Urban residential & open spa																
NEPM (1999) HIL A - Residential (garden)																
NEPM (1999) HSL A Residential - Asbestos																
NEPM (1999) HIL C - Recreation																
NEPM (1999) HSL C Recreation - Asbestos																
NEPM (1999) HIL D - Commercial/Industrial																
NEPM (1999) HSL D Comm/Indust - Asbestos																
NEPM (1999) EIL - Urban Residential & Open Space																
NEPM (1999) ESL - Urban Residential & Open Space (fine)																
NEPM (1999) EIL - Commercial/Industrial																
NEPM (1999) ESL - Commercial/Industrial (fine)																
NEPM (1999) HSL B Residential - Asbestos																
Field_ID																
AI_TP59_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP59_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP60_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP60_0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP61_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP61_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP62_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP62_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP66_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP66_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP67_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP67_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP71_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP71_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP75_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP75_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP76_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP76_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP78_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP78_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP79_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP80_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP81_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP81_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP82_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP82_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP83_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP83_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP84_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP84_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP85_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP86_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP86_0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP88_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP88_0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AI_TP89_0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

	VOC										Volatile					
	Tetrachloroethene	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m		480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m		NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m		NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m		NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m		NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m		NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)																
NEPM (1999) Management Limits - Urban residential & open spa																
NEPM (1999) HIL A - Residential (garden)																
NEPM (1999) HSL A Residential - Asbestos																
NEPM (1999) HIL C - Recreation																
NEPM (1999) HSL C Recreation - Asbestos																
NEPM (1999) HIL D - Commercial/Industrial																
NEPM (1999) HSL D Comm/Indust - Asbestos																
NEPM (1999) EIL - Urban Residential & Open Space																
NEPM (1999) ESL - Urban Residential & Open Space (fine)		105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial																
NEPM (1999) ESL - Commercial/Industrial (fine)		135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																
Field_ID																
AI_TP59_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP59_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP60_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP60_0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP61_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP61_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP62_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP62_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP66_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP66_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP67_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP67_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP71_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP71_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP75_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP75_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP76_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP76_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP78_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP78_0.3	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP79_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP80_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP81_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP81_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP82_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP82_0.3	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP83_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP83_0.3	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP84_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP84_0.3	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP85_0.3	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP86_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP86_0.4	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP88_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP88_0.3	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP89_0.1	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

WPCA,Aerotropolis

	VOC																																											Volatile					
	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene	Toluene	Ethylbenzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Xylene (m & p)	Xylene (o)	Xylene Total	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.5	0.5	0.5	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m											0.7																							480	NL							110	0.7	480	NL			110
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m											1																							NL	NL							310	1	NL	NL			310
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m											NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m											NL																							NL	NL							NL	NL	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m											4																							NL	NL							NL	4	NL	NL			NL
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m											6																							NL	NL							NL	6	NL	NL			NL
NEPM (1999) Management Limits - Commercial/Industrial (fine)																																																
NEPM (1999) Management Limits - Urban residential & open spa																																																
NEPM (1999) HIL A - Residential (garden)																																																
NEPM (1999) HSL A Residential - Asbestos																																																
NEPM (1999) HIL C - Recreation																																																
NEPM (1999) HSL C Recreation - Asbestos																																																
NEPM (1999) HIL D - Commercial/Industrial																																																
NEPM (1999) HSL D Comm/Indust - Asbestos																																																
NEPM (1999) EIL - Urban Residential & Open Space																																																
NEPM (1999) ESL - Urban Residential & Open Space (fine)											65																							105	125							45	65	105	125			45
NEPM (1999) EIL - Commercial/Industrial																																																
NEPM (1999) ESL - Commercial/Industrial (fine)											95																							135	185							95	95	135	185			95
NEPM (1999) HSL B Residential - Asbestos																																																

Field_ID	LocCode	Sampled_Date-Time																																																
AI_TP89_0.3	AI_TP89	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP90_0.1	AI_TP90	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP90_0.3	AI_TP90	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP91_0.1	AI_TP91	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP91_0.3	AI_TP91	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP92_0.3	AI_TP92	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP92_0.5	AI_TP92	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP93_0.3	AI_TP93	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP93_0.1	AI_TP93	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP94_0.3	AI_TP94	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP94_0.1	AI_TP94	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP95_0.3	AI_TP95	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP95_0.1	AI_TP95	8/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP96_0.1	AI_TP96	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP96_0.3	AI_TP96	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP98_0.1	AI_TP98	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP98_0.3	AI_TP98	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
AI_TP99_0.3	AI_TP99	15/11/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

Statistical Summary

Number of Results	466	466	466	466	466	466	466	466	466	466	13	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	466	11	1	466	466	466	466	3	1	29	453	455	465	463	465	437
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.2	<0.1	<0.3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.2	<0.1	<0.3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.05	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.05		0.25	0.25	0.25	0.25	0.1		0.15	0.05	0.05	0.05	0.1	0.05	0.15
Median Concentration	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.05	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.05	0.05	0.25	0.25	0.25	0.25	0.1	0.05	0.15	0.05	0.05	0.05	0.1	0.05	0.15
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
A1_TP128_0.1	A1_TP128	16/06/2022	1	1	125	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.8	<0.4	17	22	28	<0.1	11	32
A1_TP128_0.3	A1_TP128	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	<0.4	23	26	30	<0.1	13	40
A1_TP129_0.1	A1_TP129	16/06/2022	1	1	161	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6	<0.4	20	20	18	<0.1	10	45
A1_TP129_0.3	A1_TP129	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	<0.4	25	33	23	<0.1	16	56
A1_TP130_0.1	A1_TP130	16/06/2022	1	1	68	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.3	<0.4	19	28	21	<0.1	13	63
A1_TP130_0.3	A1_TP130	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	17	26	12	<0.1	8.3	40
A1_TP131_0.1	A1_TP131	16/06/2022	1	1	172	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9	<0.4	17	24	24	<0.1	13	47
A1_TP131_0.3	A1_TP131	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	21	26	21	<0.1	12	41
A1_TP153_0.1	A1_TP153	16/06/2022	1	1	203	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.9	<0.4	16	17	25	<0.1	13	42
A1_TP153_0.3	A1_TP153	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	16	16	20	<0.1	12	29
A1_TP159_0.3	A1_TP159	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	34	29	37	<0.1	15	52
A1_TP256_0.1	A1_TP256	16/06/2022	1	1	178	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	26	19	26	<0.1	9.2	34
A1_TP256_0.3	A1_TP256	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	<0.4	48	21	36	<0.1	12	36
A1_TP257_0.1	A1_TP257	16/06/2022	1	1	200	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.7	<0.4	16	14	25	<0.1	9.4	32
A1_TP257_0.3	A1_TP257	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	<0.4	17	16	21	<0.1	8.9	19
A1_TP258_0.1	A1_TP258	16/06/2022	1	1	205	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.4	<0.4	18	17	21	<0.1	13	31
A1_TP258_0.3	A1_TP258	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9	<0.4	16	14	15	<0.1	11	25
A1_TP259_0.1	A1_TP259	16/06/2022	1	1	260	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.7	<0.4	20	23	30	<0.1	12	43
A1_TP259_0.3	A1_TP259	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	<0.4	17	17	18	<0.1	12	24
A1_TP260_0.1	A1_TP260	16/06/2022	1	1	196	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5	<0.4	14	8.1	20	<0.1	5.3	21
A1_TP260_0.3	A1_TP260	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	34	15	45	<0.1	9.6	25
A1_TP262_0.1	A1_TP262	16/06/2022	1	1	186	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.4	<0.4	14	10	14	<0.1	9.2	19
A1_TP262_0.3	A1_TP262	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	<0.4	19	17	18	<0.1	10	21
A1_TP303_0.1	A1_TP303	16/06/2022	1	1	203	0	1	1	0	0	0	0	0	0	0	1	1	1	0	12	<0.4	20	25	32	<0.1	18	67
A1_TP303_0.3	A1_TP303	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	22	16	31	<0.1	18	72
A1_TP305_0.1	A1_TP305	16/06/2022	1	1	108	0	1	1	0	0	0	0	0	0	0	1	1	1	0	13	<0.4	22	18	29	<0.1	11	56
A1_TP305_0.3	A1_TP305	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	31	22	24	<0.1	13	40
A1_TP315_0.1	A1_TP315	16/06/2022	1	1	131	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.2	<0.4	14	15	21	<0.1	10	50
A1_TP315_0.3	A1_TP315	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.2	<0.4	21	23	26	<0.1	19	55
A1_TP36_0.1	A1_TP36	16/06/2022	1	1	214	0	1	1	0	0	0	0	0	0	0	-	1	1	0	7.9	<0.4	21	15	18	<0.1	7.9	27
A1_TP36_0.3	A1_TP36	16/06/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	<0.4	41	15	34	<0.1	9.9	25

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP02-0.1	AI_TP02	9/11/2021	1	1	668	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.4	<0.4	16	13	13	<0.1	8.1	21
AI_TP02-0.3	AI_TP02	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4	<0.4	15	17	8.9	<0.1	8.4	29
AI_TP03-0.1	AI_TP03	9/11/2021	1	1	680	0	1	1	0	0	0	0	0	0	0	0	1	1	0	7.1	<0.4	14	12	20	<0.1	8.6	31
AI_TP03-0.3	AI_TP03	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	<0.4	17	20	11	<0.1	8.9	37
AI_TP05_0.1	AI_TP05	4/11/2021	1	1	677	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5	<0.4	12	15	10	<0.1	7.3	26
AI_TP05_0.3	AI_TP05	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	<0.4	17	22	12	<0.1	11	35
AI_TP06_0.3	AI_TP06	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	<0.4	18	18	9.9	<0.1	8.1	29
AI_TP06_0.1	AI_TP06	17/12/2021	1	1	594	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.7	<0.4	13	6.9	11	<0.1	5.3	10
AI_TP08_0.1	AI_TP08	4/11/2021	1	1	633	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.7	<0.4	13	10	14	<0.1	8.2	18
AI_TP08_0.3	AI_TP08	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.8	<0.4	18	24	14	<0.1	12	40
AI_TP09_0.1	AI_TP09	17/12/2021	1	1	35	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.2	<0.4	10	9	14	<0.1	6.9	18
AI_TP09_0.4	AI_TP09	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.4	16	19	11	<0.1	8.6	29
AI_TP100_0.1	AI_TP100	15/11/2021	1	1	425	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8	<0.4	15	16	19	<0.1	9	32
AI_TP100_0.3	AI_TP100	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.3	<0.4	18	23	18	<0.1	12	32
AI_TP101_0.1	AI_TP101	15/11/2021	1	1	454	0	1	1	0	0	0	0	0	0	0	1	1	1	0	14	<0.4	66	51	27	0.1	61	98
AI_TP101_0.3	AI_TP101	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	<0.4	39	37	17	<0.1	43	72
AI_TP102_0.3	AI_TP102	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	28	28	24	<0.1	12	41
AI_TP102_0.1	AI_TP102	8/11/2021	1	1	501	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	29	24	27	<0.1	14	44
AI_TP103_0.3	AI_TP103	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	<0.4	40	27	24	<0.1	10	37
AI_TP103_0.1	AI_TP103	8/11/2021	1	1	523	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.6	<0.4	28	28	32	<0.1	9.3	41
AI_TP104_0.5	AI_TP104	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	<0.4	57	41	38	<0.1	17	70
AI_TP104_0.1	AI_TP104	8/11/2021	1	1	615	0	1	1	0	0	0	0	0	0	0	1	1	1	0	21	<0.4	63	21	45	<0.1	17	61
AI_TP105_0.1	AI_TP105	20/12/2021	1	1	532	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	24	11	24	<0.1	8	24
AI_TP105_0.4	AI_TP105	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	<0.4	23	22	17	<0.1	8.6	36
AI_TP107_0.1	AI_TP107	15/11/2021	1	1	541	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.8	<0.4	15	21	17	<0.1	12	39
AI_TP107_0.3	AI_TP107	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	26	22	13	<0.1	18	46
AI_TP108_0.1	AI_TP108	20/12/2021	1	1	606	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	34	38	27	<0.1	30	73
AI_TP108_0.5	AI_TP108	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	<0.4	13	21	6.7	<0.1	9.8	53
AI_TP109_0.1	AI_TP109	15/11/2021	1	1	382	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.7	<0.4	19	26	22	<0.1	15	63
AI_TP109_0.3	AI_TP109	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2	<0.4	22	50	18	<0.1	19	86
AI_TP11-0.1	AI_TP11	9/11/2021	1	1	48	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.8	<0.4	15	21	11	<0.1	8.7	28
AI_TP110_0.1	AI_TP110	15/11/2021	1	1	387	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.3	<0.4	26	23	25	<0.1	13	44
AI_TP110_0.3	AI_TP110	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	<0.4	32	42	24	<0.1	17	67
AI_TP111_0.3	AI_TP111	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.8	<0.4	24	27	28	<0.1	10	38
AI_TP111_0.1	AI_TP111	8/11/2021	1	1	255	0	1	1	0	0	0	0	0	0	0	1	1	1	0	14	<0.4	39	27	38	<0.1	11	53
AI_TP112_0.3	AI_TP112	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	<0.4	26	32	20	<0.1	8.9	43

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP112_0.1	AI_TP112	8/11/2021	1	1	397	0	1	1	0	0	0	0	0	0	0	1	1	1	0	13	<0.4	27	20	27	<0.1	11	47
AI_TP113_0.3	AI_TP113	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	22	23	30	<0.1	10	29
AI_TP113_0.1	AI_TP113	8/11/2021	1	1	459	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.9	<0.4	23	13	24	<0.1	7.9	24
AI_TP115_0.1	AI_TP115	15/11/2021	1	1	271	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.1	<0.4	18	14	18	<0.1	13	18
AI_TP115_0.3	AI_TP115	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	28	23	22	<0.1	20	47
AI_TP116_0.1	AI_TP116	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	22	19	24	<0.1	13	29
AI_TP117_0.1	AI_TP117	8/11/2021	1	1	438	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	22	40	24	<0.1	22	96
AI_TP117_0.2	AI_TP117	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	25	36	21	<0.1	21	96
AI_TP118_0.1	AI_TP118	8/11/2021	1	1	327	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.8	<0.4	17	23	23	<0.1	15	47
AI_TP118_0.2	AI_TP118	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	25	35	26	<0.1	15	52
AI_TP119_0.3	AI_TP119	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	23	25	23	<0.1	10	37
AI_TP119_0.1	AI_TP119	8/11/2021	1	1	334	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	27	24	29	<0.1	17	62
AI_TP12_0.1	AI_TP12	4/11/2021	1	1	615	0	1	1	0	0	0	0	0	0	0	1	1	1	0	15	<0.4	22	22	25	<0.1	18	50
AI_TP12_0.3	AI_TP12	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	<0.4	20	28	14	<0.1	12	40
AI_TP120_0.3	AI_TP120	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	<0.4	31	24	23	<0.1	7.1	33
AI_TP120_0.1	AI_TP120	8/11/2021	1	1	295	0	1	1	0	0	0	0	0	0	0	1	1	1	0	18	<0.4	35	21	34	<0.1	8.9	45
AI_TP121_0.3	AI_TP121	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	26	33	21	<0.1	15	54
AI_TP121_0.1	AI_TP121	8/11/2021	1	1	381	0	1	1	0	0	0	0	0	0	0	1	1	1	0	21	<0.4	31	45	35	<0.1	29	91
AI_TP122_0.3	AI_TP122	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	26	21	16	<0.1	18	43
AI_TP122_0.1	AI_TP122	8/11/2021	1	1	357	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	20	18	21	<0.1	16	46
AI_TP123_0.3	AI_TP123	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.4	23	26	16	<0.1	21	46
AI_TP123_0.1	AI_TP123	8/11/2021	1	1	543	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.4	<0.4	28	48	33	<0.1	57	170
AI_TP124_0.3	AI_TP124	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	26	28	24	<0.1	25	63
AI_TP124_0.1	AI_TP124	8/11/2021	1	1	423	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.3	<0.4	21	22	28	<0.1	16	46
AI_TP125_0.3	AI_TP125	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	25	34	17	<0.1	11	40

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP125_0.1	AI_TP125	8/11/2021	1	1	441	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.1	<0.4	21	27	17	<0.1	11	36
AI_TP126_0.3	AI_TP126	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.3	<0.4	18	30	20	<0.1	19	64
AI_TP126_0.1	AI_TP126	8/11/2021	1	1	356	0	1	1	0	0	0	0	0	0	0	1	1	1	0	13	<0.4	22	29	27	<0.1	17	54
AI_TP127_0.3	AI_TP127	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	41	34	27	<0.1	26	65
AI_TP127_0.1	AI_TP127	8/11/2021	1	1	378	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.8	<0.4	32	25	25	<0.1	24	50
AI_TP13_0.1	AI_TP13	4/11/2021	1	1	664	0	1	1	0	0	0	0	0	0	0	1	1	1	0	16	<0.4	23	12	22	<0.1	10	27
AI_TP13_0.3	AI_TP13	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	<0.4	24	25	12	<0.1	10	44
AI_TP132_0.1	AI_TP132	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	29	36	25	<0.1	21	64
AI_TP132_0.3	AI_TP132	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	29	25	29	<0.1	19	54
AI_TP133_0.1	AI_TP133	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.4	<0.4	19	27	22	<0.1	14	60
AI_TP133_0.3	AI_TP133	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	<0.4	22	43	24	<0.1	19	78
AI_TP134_0.1	AI_TP134	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.3	<0.4	25	23	15	<0.1	6.8	31
AI_TP134_0.3	AI_TP134	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	<0.4	21	24	16	<0.1	6.8	30
AI_TP135_0.1	AI_TP135	1/11/2021	1	1	364	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.6	<0.4	25	17	20	<0.1	10	27
AI_TP135_0.3	AI_TP135	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.2	<0.4	26	20	16	<0.1	8.6	34
AI_TP136_0.1	AI_TP136	1/11/2021	1	1	516	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.6	<0.4	21	20	21	<0.1	14	55
AI_TP136_0.3	AI_TP136	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	26	38	17	<0.1	11	62
AI_TP137_0.1	AI_TP137	1/11/2021	1	1	484	0	1	1	0	0	0	0	0	0	0	1	1	1	0	12	<0.4	28	28	26	<0.1	15	54
AI_TP137_0.3	AI_TP137	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	<0.4	30	20	27	<0.1	13	34
AI_TP138_0.1	AI_TP138	1/11/2021	1	1	518	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.3	<0.4	19	30	22	<0.1	10	53
AI_TP138_0.3	AI_TP138	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	<0.4	17	24	20	<0.1	12	49
AI_TP139_0.1	AI_TP139	1/11/2021	1	1	490	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.1	<0.4	19	23	15	<0.1	6.8	30
AI_TP139_0.3	AI_TP139	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.1	<0.4	26	27	18	<0.1	8.7	38
AI_TP14_0.1	AI_TP14	17/12/2021	1	1	642	0	1	1	0	0	0	0	0	0	0	1	1	1	0	14	<0.4	26	13	25	<0.1	9.6	34
AI_TP14_0.4	AI_TP14	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	<0.4	36	18	33	<0.1	13	39
AI_TP140_0.1	AI_TP140	1/11/2021	1	1	211	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	31	20	30	<0.1	15	63
AI_TP140_0.3	AI_TP140	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.6	<0.4	22	31	12	<0.1	14	62
AI_TP141_0.1	AI_TP141	1/11/2021	1	1	504	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.4	<0.4	15	11	16	<0.1	6.4	17
AI_TP141_0.3	AI_TP141	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	24	31	24	<0.1	12	47
AI_TP142_0.3	AI_TP142	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.9	<0.4	23	21	17	<0.1	14	37
AI_TP142_0.1	AI_TP142	8/11/2021	1	1	374	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	22	17	20	<0.1	9.3	35
AI_TP143_0.3	AI_TP143	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	33	23	25	<0.1	13	42
AI_TP143_0.1	AI_TP143	8/11/2021	1	1	379	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.1	<0.4	16	22	33	<0.1	12	71
AI_TP144_0.2	AI_TP144	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	22	32	12	<0.1	14	43
AI_TP144_0.1	AI_TP144	8/11/2021	1	1	392	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.3	<0.4	17	20	14	<0.1	14	34
AI_TP144_0.2	AI_TP144	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	<0.4	12	5.3	<5	<0.1	6.9	20

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP145_0.3	AI_TP145	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	<0.4	21	29	13	<0.1	9.9	34
AI_TP145_0.1	AI_TP145	8/11/2021	1	1	524	0	1	1	0	0	0	0	0	0	0	1	1	1	0	18	<0.4	22	25	17	<0.1	22	36
AI_TP146_0.3	AI_TP146	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	<0.4	24	26	9.8	<0.1	16	57
AI_TP146_0.1	AI_TP146	8/11/2021	1	1	414	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.1	<0.4	23	18	13	<0.1	15	44
AI_TP147_0.3	AI_TP147	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	<0.4	36	25	16	<0.1	12	39
AI_TP147_0.1	AI_TP147	8/11/2021	1	1	491	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	25	21	21	<0.1	10	42
AI_TP148_0.3	AI_TP148	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	19	32	11	<0.1	8.7	33
AI_TP148_0.1	AI_TP148	8/11/2021	1	1	264	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	22	30	17	<0.1	16	49
AI_TP149_0.3	AI_TP149	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.3	<0.4	18	22	12	<0.1	15	39
AI_TP149_0.1	AI_TP149	8/11/2021	1	1	493	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.8	<0.4	25	26	18	<0.1	17	39
AI_TP15-0.1	AI_TP15	9/11/2021	1	1	656	0	1	1	0	0	0	0	0	0	0	1	1	1	0	2.1	<0.4	5.8	6.3	6	<0.1	<5	9.8
AI_TP15-0.3	AI_TP15	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7	<0.4	18	22	11	<0.1	9.2	33
AI_TP150_0.1	AI_TP150	3/11/2021	1	1	553	0	1	1	0	0	0	0	0	0	0	1	1	1	0	16	<0.4	33	26	33	<0.1	19	68
AI_TP150_0.3	AI_TP150	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.8	<0.4	19	24	16	<0.1	9.1	42
AI_TP151_0.1	AI_TP151	3/11/2021	1	1	524	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.9	<0.4	20	17	16	<0.1	9.3	28
AI_TP151_0.3	AI_TP151	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	<0.4	39	29	22	<0.1	14	48
AI_TP152_0.1	AI_TP152	3/11/2021	1	1	620	0	1	1	0	0	0	0	0	0	0	-	1	1	0	7.6	<0.4	19	21	19	<0.1	15	48
AI_TP152_0.3	AI_TP152	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.6	<0.4	21	24	17	<0.1	13	52
AI_TP158_0.1	AI_TP158	27/10/2021	1	1	522	0	1	1	0	0	0	0	0	0	0	1	1	1	0	16	<0.4	31	22	29	<0.1	9.7	37
AI_TP158_0.3	AI_TP158	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	26	35	28	<0.1	13	75
AI_TP16_0.1	AI_TP16	17/12/2021	1	1	647	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.1	<0.4	9.5	8.1	12	<0.1	6.2	24
AI_TP16_0.3	AI_TP16	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	14	13	10	<0.1	8.1	24
AI_TP160_0.3	AI_TP160	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	<0.4	17	26	17	<0.1	11	42
AI_TP163_0.1	AI_TP163	27/10/2021	1	1	580	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.9	<0.4	23	18	27	<0.1	17	51
AI_TP163_0.3	AI_TP163	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7	<0.4	22	22	15	<0.1	7.1	33
AI_TP164_0.1	AI_TP164	27/10/2021	1	1	534	0	1	1	0	0	0	0	0	0	0	1	1	1	0	12	<0.4	31	21	34	<0.1	20	65
AI_TP164_0.4	AI_TP164	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	27	23	20	<0.1	9.7	42
AI_TP165_0.1	AI_TP165	27/10/2021	1	1	517	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.1	<0.4	15	11	13	<0.1	8.8	18
AI_TP165_0.3	AI_TP165	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	<0.4	18	16	12	<0.1	6.3	24
AI_TP166_0.1	AI_TP166	27/10/2021	1	1	556	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.6	<0.4	18	19	20	<0.1	16	42
AI_TP166_0.3	AI_TP166	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.3	<0.4	14	22	11	<0.1	8.4	31
AI_TP167_0.1	AI_TP167	27/10/2021	1	1	541	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7	<0.4	19	19	30	<0.1	11	51
AI_TP167_0.3	AI_TP167	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	23	17	15	<0.1	7.2	29
AI_TP168_0.1	AI_TP168	27/10/2021	1	1	673	0	1	1	0	0	0	0	0	0	0	1	1	1	0	13	<0.4	29	18	24	<0.1	9.2	33
AI_TP168_0.3	AI_TP168	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	<0.4	32	23	23	<0.1	7.4	34
AI_TP169_0.1	AI_TP169	27/10/2021	1	1	569	0	1	1	0	0	0	0	0	0	0	1	1	1	0	13	<0.4	37	28	35	<0.1	19	66

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP169_0.3	AI_TP169	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	<0.4	20	22	18	<0.1	5.6	29
AI_TP170_0.1	AI_TP170	27/10/2021	1	1	539	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.6	<0.4	26	22	27	<0.1	17	70
AI_TP170_0.3	AI_TP170	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.7	<0.4	23	30	17	<0.1	11	51
AI_TP171_0.1	AI_TP171	27/10/2021	1	1	615	0	1	1	0	0	0	0	0	0	0	1	1	1	0	12	<0.4	33	15	27	<0.1	8.5	26
AI_TP171_0.3	AI_TP171	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.4	<0.4	32	23	19	<0.1	6.6	28
AI_TP172_0.1	AI_TP172	27/10/2021	1	1	582	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.9	<0.4	17	17	24	<0.1	8.6	47
AI_TP172_0.3	AI_TP172	27/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.1	<0.4	28	22	16	<0.1	8.1	37
AI_TP173_0.1	AI_TP173	17/12/2021	1	1	629	0	1	1	0	0	0	0	0	0	0	1	1	1	0	12	<0.4	27	17	24	<0.1	7	22
AI_TP173_0.4	AI_TP173	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	30	30	16	<0.1	11	36
AI_TP176_0.1	AI_TP176	3/11/2021	1	1	537	0	1	1	0	0	0	0	0	0	0	1	1	1	0	13	<0.4	32	14	27	<0.1	9.3	27
AI_TP176_0.3	AI_TP176	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.5	<0.4	20	24	14	<0.1	8.1	29
AI_TP177_0.1	AI_TP177	17/12/2021	1	1	548	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.4	<0.4	18	21	20	<0.1	14	33
AI_TP177_0.4	AI_TP177	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	<0.4	23	28	13	<0.1	12	37
AI_TP178_0.1	AI_TP178	17/12/2021	1	1	468	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.2	<0.4	22	25	22	<0.1	13	53
AI_TP178_0.4	AI_TP178	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.2	<0.4	23	31	14	<0.1	9.9	37
AI_TP179_0.1	AI_TP179	17/12/2021	1	1	446	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.2	<0.4	19	22	22	<0.1	12	39
AI_TP179_0.4	AI_TP179	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.1	<0.4	22	27	12	<0.1	12	28
AI_TP18_0.2	AI_TP18	17/12/2021	1	1	37	0	1	1	0	0	0	0	0	0	0	1	1	1	0	2.9	<0.4	8.5	6.1	9.1	<0.1	<5	11
AI_TP181_0.1	AI_TP181	3/11/2021	1	1	45 - 525	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.6 - 10	<0.4	24 - 26	15	27	<0.1	8.3	22 - 25
AI_TP181_0.3	AI_TP181	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.1 - 9.2	<0.4	31	25 - 26	19 - 20	<0.1	12 - 13	36 - 37
AI_TP182_0.1	AI_TP182	3/11/2021	1	1	45 - 545	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11 - 13	<0.4	25 - 29	15 - 17	25 - 30	<0.1	7.9 - 8	23
AI_TP182_0.3	AI_TP182	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.2 - 12	<0.4	30 - 37	25	16 - 21	<0.1	10 - 11	31 - 33
AI_TP183_0.1	AI_TP183	3/11/2021	1	1	617	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.8	<0.4	25	13	24	<0.1	8.8	28
AI_TP183_0.3	AI_TP183	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	<0.4	22	16	14	<0.1	9.5	22
AI_TP184_0.1	AI_TP184	17/12/2021	1	1	548	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.3	<0.4	20	20	22	<0.1	9.6	29
AI_TP184_0.4	AI_TP184	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	<0.4	21	26	14	<0.1	12	29
AI_TP186_0.1	AI_TP186	3/11/2021	1	1	522	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	27	11	27	<0.1	7	14
AI_TP186_0.3	AI_TP186	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	45	24	23	<0.1	17	40
AI_TP187_0.1	AI_TP187	3/11/2021	1	1	493	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.6	<0.4	24	11	18	<0.1	9.7	14
AI_TP187_0.3	AI_TP187	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.3	<0.4	38	21	16	<0.1	15	24
AI_TP188_0.1	AI_TP188	3/11/2021	1	1	618	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9	<0.4	25	9.9	24	<0.1	7.7	15
AI_TP188_0.3	AI_TP188	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	<0.4	25	23	14	<0.1	11	28
AI_TP189_0.1	AI_TP189	3/11/2021	1	1	556	0	1	1	0	0	0	0	0	0	0	0	1	1	0	8.2	<0.4	20	13	23	<0.1	9.7	17
AI_TP189_0.3	AI_TP189	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.2	<0.4	25	21	22	<0.1	9	27
AI_TP19_0.1	AI_TP19	17/12/2021	1	1	638	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	22	9.8	22	<0.1	8.5	22
AI_TP19_0.3	AI_TP19	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	28	17	13	<0.1	12	43

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP193_0.1	AI_TP193	2/11/2021	1	1	570	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8	<0.4	19	14	22	<0.1	7.9	33
AI_TP193_0.3	AI_TP193	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	28	26	17	<0.1	7.6	34
AI_TP194_0.1	AI_TP194	2/11/2021	1	1	506	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.3	<0.4	25	9.9	22	<0.1	6.2	15
AI_TP194_0.3	AI_TP194	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	<0.4	46	32	22	<0.1	14	33
AI_TP195_0.1	AI_TP195	2/11/2021	1	1	512	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	25	15	43	<0.1	15	15
AI_TP195_0.3	AI_TP195	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	<0.4	24	19	14	<0.1	11	26
AI_TP196_0.1	AI_TP196	2/11/2021	1	1	551	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.9	<0.4	18	15	21	<0.1	9.6	33
AI_TP196_0.3	AI_TP196	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	<0.4	24	22	16	<0.1	11	36
AI_TP197_0.1	AI_TP197	17/12/2021	1	1	543	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.3	<0.4	18	11	14	<0.1	6.2	9.9
AI_TP197_0.4	AI_TP197	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.4	<0.4	25	23	13	<0.1	11	29
AI_TP20_0.1	AI_TP20	17/12/2021	1	1	596	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	18	9.9	25	<0.1	8.5	17
AI_TP20_0.4	AI_TP20	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	22	23	20	<0.1	11	43
AI_TP200_0.1	AI_TP200	2/11/2021	1	1	598	0	1	1	0	0	0	0	0	0	0	1	1	1	0	15	<0.4	36	21	31	<0.1	12	32
AI_TP200_0.3	AI_TP200	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	39	29	22	<0.1	14	46
AI_TP201_0.1	AI_TP201	2/11/2021	1	1	580	0	1	1	0	0	0	0	0	0	0	1	1	1	0	13	<0.4	31	20	35	<0.1	16	60
AI_TP201_0.3	AI_TP201	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	<0.4	32	42	18	<0.1	18	75
AI_TP202_0.1	AI_TP202	2/11/2021	1	1	384	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.4	<0.4	21	14	19	<0.1	8.2	26
AI_TP202_0.3	AI_TP202	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.4	24	13	16	<0.1	14	35
AI_TP203_0.1	AI_TP203	2/11/2021	1	1	584	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.8	<0.4	13	5.4	13	<0.1	<5	8.8
AI_TP203_0.3	AI_TP203	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.2	<0.4	28	21	19	<0.1	17	26
AI_TP204_0.1	AI_TP204	2/11/2021	1	1	566	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.9	<0.4	23	7.3	16	<0.1	5.4	9
AI_TP204_0.3	AI_TP204	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	<0.4	22	12	15	<0.1	5.2	13
AI_TP205_0.1	AI_TP205	3/11/2021	1	1	526	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.5	<0.4	17	14	23	<0.1	8.7	18
AI_TP205_0.3	AI_TP205	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	<0.4	20	28	13	<0.1	13	27
AI_TP208_0.1	AI_TP208	2/11/2021	1	1	487	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	20	15	22	<0.1	8.7	28
AI_TP208_0.3	AI_TP208	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	<0.4	18	21	13	<0.1	11	39
AI_TP209_0.1	AI_TP209	2/11/2021	1	1	516	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	19	13	25	<0.1	11	21
AI_TP209_0.3	AI_TP209	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	<0.4	21	29	14	<0.1	9	37
AI_TP21_0.1	AI_TP21	4/11/2021	1	1	745	0	1	1	0	0	0	0	0	0	0	1	1	1	0	17	<0.4	33	38	30	<0.1	22	71
AI_TP21_0.3	AI_TP21	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	<0.4	39	46	29	<0.1	29	97
AI_TP210_0.1	AI_TP210	2/11/2021	1	1	534	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	18	12	19	<0.1	5.9	20
AI_TP210_0.3	AI_TP210	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	20	19	11	<0.1	5.9	21
AI_TP211_0.1	AI_TP211	2/11/2021	1	1	513	0	1	1	0	0	0	0	0	0	0	1	1	1	0	17	<0.4	34	11	31	<0.1	9.9	26
AI_TP211_0.3	AI_TP211	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	20	22	11	<0.1	6.5	19
AI_TP212_0.1	AI_TP212	2/11/2021	1	1	520	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.3	<0.4	17	5.1	14	<0.1	<5	8.7
AI_TP212_0.3	AI_TP212	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	36	22	17	<0.1	14	23

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP213_0.1	AI_TP213	2/11/2021	1	1	546	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.7	<0.4	26	10	20	<0.1	<5	10
AI_TP213_0.3	AI_TP213	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	35	21	23	<0.1	9.7	23
AI_TP214_0.1	AI_TP214	2/11/2021	1	1	518	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.2	<0.4	17	12	25	<0.1	5.5	12
AI_TP214_0.3	AI_TP214	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4	<0.4	21	22	16	<0.1	13	21
AI_TP215_0.1	AI_TP215	3/11/2021	1	1	382	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.1	<0.4	24	25	27	<0.1	14	53
AI_TP215_0.3	AI_TP215	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.9	<0.4	24	30	16	<0.1	14	40
AI_TP216_0.1	AI_TP216	17/12/2021	1	1	453	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.7	<0.4	16	19	18	<0.1	10	28
AI_TP216_0.4	AI_TP216	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	<0.4	20	19	12	<0.1	10	26
AI_TP217_0.1	AI_TP217	2/11/2021	1	1	518	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	27	23	26	<0.1	15	43
AI_TP217_0.3	AI_TP217	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.4	<0.4	24	36	16	<0.1	14	49
AI_TP218_0.1	AI_TP218	2/11/2021	1	1	505	0	1	1	0	0	0	0	0	0	0	1	1	1	0	14	<0.4	30	19	30	<0.1	11	41
AI_TP218_0.3	AI_TP218	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	23	30	16	<0.1	11	47
AI_TP219_0.1	AI_TP219	2/11/2021	1	1	519	0	1	1	0	0	0	0	0	0	0	1	1	1	0	19	<0.4	43	22	37	<0.1	16	54
AI_TP219_0.3	AI_TP219	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	<0.4	27	38	22	<0.1	15	66
AI_TP22_0.1	AI_TP22	4/11/2021	1	1	583	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.5	<0.4	13	12	10	<0.1	7.1	21
AI_TP22_0.3	AI_TP22	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	<0.4	21	26	12	<0.1	14	37
AI_TP220_0.1	AI_TP220	2/11/2021	1	1	364	0	1	1	0	0	0	0	0	0	0	1	1	1	0	16	<0.4	30	15	30	<0.1	9.7	33
AI_TP220_0.3	AI_TP220	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	22	22	15	<0.1	8.3	30
AI_TP221_0.1	AI_TP221	2/11/2021	1	1	539	0	1	1	0	0	0	0	0	0	0	1	1	1	0	17	<0.4	35	15	31	<0.1	8.6	32
AI_TP221_0.3	AI_TP221	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	<0.4	39	45	36	<0.1	11	56
AI_TP222_0.1	AI_TP222	2/11/2021	1	1	483	0	1	1	0	0	0	0	0	0	0	1	1	1	0	16	<0.4	36	12	29	<0.1	6.1	25
AI_TP222_0.3	AI_TP222	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	<0.4	29	29	20	<0.1	7.9	32
AI_TP223_0.1	AI_TP223	2/11/2021	1	1	439	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	21	14	27	<0.1	7.6	22
AI_TP223_0.3	AI_TP223	2/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	<0.4	21	22	14	<0.1	9.2	21
AI_TP224_0.1	AI_TP224	3/11/2021	1	1	481	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.8	<0.4	15	18	20	<0.1	10	21
AI_TP224_0.3	AI_TP224	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.3	<0.4	28	36	14	<0.1	16	45
AI_TP225_0.1	AI_TP225	17/12/2021	1	1	468	0	1	1	0	0	0	0	0	0	0	0	1	1	0	2.6	<0.4	12	15	8.7	<0.1	6.5	17
AI_TP225_0.4	AI_TP225	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<0.4	9.6	13	7.1	<0.1	<5	11
AI_TP226_0.1	AI_TP226	3/11/2021	1	1	869	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.4	<0.4	20	14	23	<0.1	12	30
AI_TP226_0.3	AI_TP226	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	34	36	25	<0.1	21	69
AI_TP227_0.1	AI_TP227	3/11/2021	1	1	658	0	1	1	0	0	0	0	0	0	0	1	1	1	0	15	<0.4	33	23	38	<0.1	17	51
AI_TP227_0.3	AI_TP227	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	<0.4	40	45	31	<0.1	24	92
AI_TP228_0.1	AI_TP228	3/11/2021	1	1	590	0	1	1	0	0	0	0	0	0	0	1	1	1	0	21	<0.4	46	36	48	<0.1	26	86
AI_TP228_0.3	AI_TP228	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	<0.4	67	100	95	<0.1	35	160
AI_TP229_0.1	AI_TP229	3/11/2021	1	1	582	0	1	1	0	0	0	0	0	0	0	1	1	1	0	14	<0.4	35	23	35	<0.1	14	46
AI_TP229_0.3	AI_TP229	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	<0.4	40	34	38	<0.1	16	63

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP23_0.1	AI_TP23	17/12/2021	1	1	557	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.5	<0.4	13	12	15	<0.1	9.6	23
AI_TP23_0.4	AI_TP23	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	<0.4	23	28	14	<0.1	15	38
AI_TP230_0.1	AI_TP230	3/11/2021	1	1	521	0	1	1	0	0	0	0	0	0	0	1	1	1	0	21	<0.4	64	18	49	<0.1	16	42
AI_TP230_0.3	AI_TP230	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	<0.4	58	33	46	0.1	22	64
AI_TP231_0.1	AI_TP231	3/11/2021	1	1	639	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.5	<0.4	18	15	13	<0.1	5.3	14
AI_TP231_0.3	AI_TP231	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	<0.4	36	36	20	<0.1	22	51
AI_TP232_0.1	AI_TP232	3/11/2021	1	1	661	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.3	<0.4	8.4	12	16	<0.1	6	16
AI_TP232_0.3	AI_TP232	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.6	<0.4	25	28	17	<0.1	13	31
AI_TP233_0.1	AI_TP233	3/11/2021	1	1	620	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.9	<0.4	24	17	22	<0.1	11	23
AI_TP233_0.3	AI_TP233	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	<0.4	16	19	9.5	<0.1	7.7	16
AI_TP234_0.1	AI_TP234	3/11/2021	1	1	633	0	1	1	0	0	0	0	0	0	0	0	1	1	0	7.5	<0.4	18	12	18	<0.1	8	18
AI_TP234_0.3	AI_TP234	3/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	<0.4	19	25	11	<0.1	11	27
AI_TP235_0.1	AI_TP235	1/11/2021	1	1	322	0	1	1	0	0	0	0	0	0	0	1	1	1	0	2.7	<0.4	7	7.2	6.8	<0.1	<5	9.8
AI_TP235_0.3	AI_TP235	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	<0.4	6.1	7.6	<5	<0.1	<5	11
AI_TP236_0.1	AI_TP236	1/11/2021	1	1	561	0	1	1	0	0	0	0	0	0	0	1	1	1	0	2.2	<0.4	5.3	<5	8.3	<0.1	<5	7.9
AI_TP236_0.3	AI_TP236	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6	<0.4	8.3	10	5.6	<0.1	<5	15
AI_TP237_0.1	AI_TP237	1/11/2021	1	1	551	0	1	1	0	0	0	0	0	0	0	1	1	1	0	<2	<0.4	<5	<5	<5	<0.1	<5	<5
AI_TP237_0.3	AI_TP237	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9	<0.4	9.6	11	7.4	<0.1	5.1	14
AI_TP238_0.1	AI_TP238	1/11/2021	1	1	692	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.6	<0.4	20	15	23	<0.1	11	24
AI_TP238_0.3	AI_TP238	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	<0.4	19	21	14	<0.1	8.7	26
AI_TP239_0.1	AI_TP239	1/11/2021	1	1	528	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.6	<0.4	16	12	20	<0.1	6.6	19
AI_TP239_0.3	AI_TP239	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	<0.4	18	12	17	<0.1	6.4	16
AI_TP24_0.1	AI_TP24	17/12/2021	1	1	542	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.6	<0.4	11	8.8	14	<0.1	5.3	23
AI_TP24_0.3	AI_TP24	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	12	11	14	<0.1	<5	15
AI_TP240_0.1	AI_TP240	1/11/2021	1	1	639	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.8	<0.4	12	7.6	15	<0.1	5.7	11
AI_TP240_0.3	AI_TP240	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	<0.4	17	11	19	<0.1	7.7	15
AI_TP241_0.1	AI_TP241	1/11/2021	1	1	592	0	1	1	0	0	0	0	0	0	0	1	1	1	0	-	-	-	-	-	-	-	-
AI_TP242_0.1	AI_TP242	1/11/2021	1	1	579	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.3	<0.4	19	14	24	<0.1	8.6	19
AI_TP242_0.3	AI_TP242	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	<0.4	32	31	39	<0.1	22	43
AI_TP243_0.1	AI_TP243	1/11/2021	1	1	663	0	1	1	0	0	0	0	0	0	0	1	1	1	0	15	<0.4	29	18	28	<0.1	9.2	21
AI_TP243_0.3	AI_TP243	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	26	25	16	<0.1	10	23
AI_TP244_0.1	AI_TP244	1/11/2021	1	1	480	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.8	<0.4	20	13	23	<0.1	7.8	22
AI_TP244_0.3	AI_TP244	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.9	<0.4	16	30	14	<0.1	8.6	40
AI_TP245_0.1	AI_TP245	1/11/2021	1	1	516	0	1	1	0	0	0	0	0	0	0	1	1	1	0	2.8	<0.4	8.7	6.2	8	<0.1	<5	8.3
AI_TP245_0.3	AI_TP245	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	<0.4	20	28	15	<0.1	13	39
AI_TP246_0.1	AI_TP246	1/11/2021	1	1	505	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.1	<0.4	10	12	17	<0.1	6.5	27

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP246_0.3	AI_TP246	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	<0.4	11	15	8	<0.1	5.8	21
AI_TP247_0.1	AI_TP247	1/11/2021	1	1	621	0	1	1	0	0	0	0	0	0	0	1	1	1	0	3.8	<0.4	8.8	7.5	12	<0.1	5.2	13
AI_TP247_0.3	AI_TP247	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	<0.4	9.8	13	7.3	<0.1	5.9	18
AI_TP248_0.1	AI_TP248	1/11/2021	1	1	753	0	1	1	0	0	0	0	0	0	0	1	1	1	0	<2	<0.4	<5	<5	<5	<0.1	<5	7.1
AI_TP248_0.3	AI_TP248	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	<0.4	7.6	9.7	<5	<0.1	<5	14
AI_TP249_0.1	AI_TP249	1/11/2021	1	1	535	0	1	1	0	0	0	0	0	0	0	1	1	1	0	<2	<0.4	<5	<5	<5	<0.1	<5	<5
AI_TP249_0.3	AI_TP249	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	12	17	10	<0.1	6.6	22
AI_TP25_0.1	AI_TP25	17/12/2021	1	1	555	0	1	1	0	0	0	0	0	0	0	1	1	1	0	3.3	<0.4	9.2	10	12	<0.1	6.4	24
AI_TP25_0.3	AI_TP25	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5	<0.4	16	19	16	<0.1	10	34
AI_TP250_0.1	AI_TP250	1/11/2021	1	1	560	0	1	1	0	0	0	0	0	0	0	1	1	1	0	3.4	<0.4	7.9	<5	7.4	<0.1	<5	8.7
AI_TP250_0.3	AI_TP250	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.7	<0.4	10	11	7.4	<0.1	<5	12
AI_TP251_0.1	AI_TP251	1/11/2021	1	1	787	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.8	<0.4	13	7.3	12	<0.1	<5	14
AI_TP251_0.3	AI_TP251	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.2	<0.4	15	13	6.5	<0.1	<5	12
AI_TP252_0.1	AI_TP252	1/11/2021	1	1	619	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	24	15	23	<0.1	9.6	24
AI_TP252_0.3	AI_TP252	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.6	<0.4	26	29	12	<0.1	17	52
AI_TP253_0.1	AI_TP253	1/11/2021	1	1	539	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7	<0.4	19	28	18	<0.1	14	47
AI_TP253_0.3	AI_TP253	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	20	40	16	<0.1	13	55
AI_TP254_0.1	AI_TP254	1/11/2021	1	1	493	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.8	<0.4	25	21	24	<0.1	16	45
AI_TP254_0.3	AI_TP254	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	<0.4	20	26	16	<0.1	11	43
AI_TP255_0.1	AI_TP255	1/11/2021	1	1	497	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	22	15	22	<0.1	13	30
AI_TP255_0.3	AI_TP255	1/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	32	48	27	<0.1	20	72
AI_TP263_0.1	AI_TP263	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	<0.4	50	22	37	<0.1	14	49
AI_TP263_0.3	AI_TP263	29/10/2021	1	1	44	0	1	1	0	0	0	0	0	0	0	1	1	1	0	14	<0.4	40	23	39	<0.1	22	85
AI_TP264_0.1	AI_TP264	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	<0.4	49	27	54	<0.1	17	76
AI_TP264_0.3	AI_TP264	29/10/2021	1	1	40	0	1	1	0	0	0	0	0	0	0	1	1	1	0	18	<0.4	39	34	24	<0.1	17	46
AI_TP265_0.1	AI_TP265	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.7	<0.4	25	21	8.8	<0.1	8.7	22
AI_TP265_0.3	AI_TP265	29/10/2021	1	1	45	0	1	1	0	0	0	0	0	0	0	1	1	1	0	17	<0.4	35	23	18	<0.1	10	28
AI_TP266_0.1	AI_TP266	29/10/2021	1	1	607	0	1	1	0	0	0	0	0	0	0	1	1	1	0	3.4	<0.4	19	17	21	<0.1	9.3	23
AI_TP266_0.3	AI_TP266	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	<0.4	29	32	24	<0.1	19	50
AI_TP267_0.1	AI_TP267	29/10/2021	1	1	656	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.2	<0.4	34	22	31	<0.1	9.9	30
AI_TP267_0.3	AI_TP267	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.1	<0.4	36	24	26	<0.1	10	34
AI_TP268_0.1	AI_TP268	29/10/2021	1	1	541	0	1	1	0	0	0	0	0	0	0	1	1	1	0	3.4	<0.4	24	31	28	<0.1	14	60
AI_TP268_0.3	AI_TP268	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<0.4	19	32	19	<0.1	<5	23
AI_TP269_0.1	AI_TP269	29/10/2021	1	1	579	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	29	26	32	<0.1	13	37
AI_TP269_0.3	AI_TP269	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	<0.4	35	32	29	<0.1	11	39
AI_TP27_0.1	AI_TP27	20/12/2021	1	1	560	0	1	1	0	0	0	0	0	0	0	-	1	1	0	7.9	<0.4	19	13	18	<0.1	7.9	27

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP27_0.4	AI_TP27	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	28	25	19	<0.1	12	42
AI_TP270_0.1	AI_TP270	29/10/2021	1	1	700	0	1	1	0	0	0	0	0	0	0	1	1	1	0	12	<0.4	43	17	42	<0.1	8.4	31
AI_TP270_0.3	AI_TP270	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	<0.4	37	29	27	<0.1	12	36
AI_TP271_0.1	AI_TP271	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	<0.4	41	16	36	<0.1	8.7	25
AI_TP271_0.3	AI_TP271	29/10/2021	1	1	692	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	26	23	13	<0.1	11	30
AI_TP272_0.1	AI_TP272	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	<0.4	23	9.8	22	<0.1	5.7	14
AI_TP272_0.3	AI_TP272	29/10/2021	1	1	46	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.3	<0.4	20	22	9.3	<0.1	8.9	24
AI_TP277_0.1	AI_TP277	29/10/2021	1	1	604	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	34	27	36	<0.1	18	52
AI_TP277_0.3	AI_TP277	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	<0.4	25	22	27	<0.1	12	41
AI_TP278_0.1	AI_TP278	29/10/2021	1	1	720	0	1	1	0	0	0	0	0	0	0	1	1	1	0	14	<0.4	41	25	39	<0.1	18	43
AI_TP278_0.3	AI_TP278	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	37	29	27	<0.1	16	46
AI_TP279_0.1	AI_TP279	29/10/2021	1	1	775	0	1	1	0	0	0	0	0	0	0	1	1	1	0	20	<0.4	50	20	47	<0.1	16	41
AI_TP279_0.3	AI_TP279	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	<0.4	48	21	37	<0.1	13	34
AI_TP28_0.1	AI_TP28	20/12/2021	1	1	505	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.2	<0.4	17	12	19	<0.1	11	22
AI_TP28_0.5	AI_TP28	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	<0.4	17	17	12	<0.1	8.2	29
AI_TP280_0.1	AI_TP280	29/10/2021	1	1	546	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.6	<0.4	20	16	23	<0.1	8	32
AI_TP280_0.3	AI_TP280	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	21	15	20	<0.1	7.7	27
AI_TP281_0.1	AI_TP281	29/10/2021	1	1	581	0	1	1	0	0	0	0	0	0	0	1	1	1	0	2.6	<0.4	12	11	22	<0.1	5.2	18
AI_TP281_0.3	AI_TP281	29/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	<0.4	21	25	17	<0.1	8.5	26
AI_TP29_0.1	AI_TP29	4/11/2021	1	1	508	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.4	<0.4	21	11	17	<0.1	6.5	14
AI_TP29_0.3	AI_TP29	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.4	<0.4	22	26	12	<0.1	10	29
AI_TP30_0.1	AI_TP30	4/11/2021	1	1	491	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.1	<0.4	13	14	11	<0.1	8.3	23
AI_TP30_0.3	AI_TP30	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.3	<0.4	18	22	12	<0.1	11	36
AI_TP31_0.1	AI_TP31	4/11/2021	1	1	542	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.3	<0.4	11	13	10	<0.1	9.4	24
AI_TP31_0.3	AI_TP31	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.5	<0.4	21	27	15	<0.1	13	40
AI_TP32_0.1	AI_TP32	17/12/2021	1	1	523	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9	<0.4	18	9.5	23	<0.1	6.6	23
AI_TP32_0.4	AI_TP32	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	<0.4	18	19	13	<0.1	8.6	32
AI_TP33-0.1	AI_TP33	9/11/2021	1	1	42	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.3	<0.4	17	23	13	<0.1	9.8	36
AI_TP34-0.1	AI_TP34	9/11/2021	1	1	37	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.1	<0.4	11	13	12	<0.1	6.5	20
AI_TP35-0.1	AI_TP35	9/11/2021	1	1	550	0	1	1	0	0	0	0	0	0	0	1	1	1	0	16	<0.4	31	17	26	<0.1	8.9	35
AI_TP35-0.2	AI_TP35	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	<0.4	41	21	30	<0.1	10	37
AI_TP36_0.1	AI_TP36	17/12/2021	1	1	634	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	17	9.1	26	<0.1	7.3	18
AI_TP36_0.4	AI_TP36	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.7	<0.4	17	18	22	<0.1	7.1	22
AI_TP36-0.1	AI_TP36	9/11/2021	1	1	440	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7	<0.4	20	11	23	<0.1	9.8	21
AI_TP36-0.3	AI_TP36	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9	<0.4	22	17	14	<0.1	8.7	29
AI_TP37_0.1	AI_TP37	20/12/2021	1	1	576	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.2	<0.4	25	13	23	<0.1	8.1	18

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP37_0.4	AI_TP37	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	30	19	23	<0.1	11	32
AI_TP39_0.1	AI_TP39	4/11/2021	1	1	554	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	28	13	26	<0.1	11	26
AI_TP39_0.3	AI_TP39	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	26	30	17	<0.1	13	46
AI_TP40_0.1	AI_TP40	4/11/2021	1	1	567	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.7	<0.4	26	10	26	<0.1	8.5	15
AI_TP40_0.3	AI_TP40	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	<0.4	23	27	13	<0.1	11	35
AI_TP41_0.1	AI_TP41	4/11/2021	1	1	502	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.9	<0.4	14	8.1	19	<0.1	8.1	15
AI_TP41_0.3	AI_TP41	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.1	<0.4	20	28	18	<0.1	14	37
AI_TP42_0.1	AI_TP42	17/12/2021	1	1	550	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.9	<0.4	11	11	15	<0.1	5.3	26
AI_TP42_0.4	AI_TP42	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	<0.4	15	15	11	<0.1	7.9	24
AI_TP43-0.1	AI_TP43	9/11/2021	1	1	606	0	1	1	0	0	0	0	0	0	0	1	1	1	0	4.9	<0.4	11	7	15	<0.1	6.5	12
AI_TP43-0.3	AI_TP43	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9	<0.4	14	13	12	<0.1	6.7	21
AI_TP45_0.1	AI_TP45	17/12/2021	1	1	694	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.7	<0.4	19	8.8	15	<0.1	5.2	16
AI_TP45_0.3	AI_TP45	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.9	<0.4	29	19	23	<0.1	12	33
AI_TP46_0.1	AI_TP46	20/12/2021	1	1	632	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.2	<0.4	21	10	20	<0.1	7.9	12
AI_TP46_0.4	AI_TP46	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.9	<0.4	23	18	13	<0.1	9.2	29
AI_TP47_0.1	AI_TP47	20/12/2021	1	1	495	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.2	<0.4	17	8.9	19	<0.1	6.4	24
AI_TP47_0.4	AI_TP47	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	<0.4	22	12	10	<0.1	5.9	17
AI_TP48_0.1	AI_TP48	20/12/2021	1	1	719	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.4	<0.4	18	<5	14	<0.1	<5	7.1
AI_TP48_0.4	AI_TP48	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	<0.4	22	15	12	<0.1	6.1	19
AI_TP49_0.1	AI_TP49	4/11/2021	1	1	657	0	1	1	0	0	0	0	0	0	0	1	1	1	0	12	<0.4	30	18	23	<0.1	9.6	30
AI_TP49_0.3	AI_TP49	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	<0.4	28	32	27	<0.1	15	57
AI_TP50_0.1	AI_TP50	4/11/2021	1	1	601	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	25	13	31	<0.1	11	30
AI_TP50_0.3	AI_TP50	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	<0.4	21	26	21	<0.1	19	36
AI_TP51_0.1	AI_TP51	4/11/2021	1	1	489	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7	<0.4	23	13	25	<0.1	8.9	19
AI_TP51_0.3	AI_TP51	4/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.7	<0.4	23	17	17	<0.1	8.3	19
AI_TP54-0.1	AI_TP54	9/11/2021	1	1	557	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.9	<0.4	9.7	6.3	20	<0.1	9.6	27
AI_TP54-0.3	AI_TP54	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4	<0.4	16	16	20	<0.1	7.6	25
AI_TP55-0.1	AI_TP55	9/11/2021	1	1	411	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.9	<0.4	18	21	17	<0.1	13	34
AI_TP55-0.3	AI_TP55	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2	<0.4	21	24	14	<0.1	15	43
AI_TP56-0.1	AI_TP56	9/11/2021	1	1	574	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	29	13	28	<0.1	8.6	23
AI_TP56-0.3	AI_TP56	9/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.8	<0.4	28	14	21	<0.1	8.6	25
AI_TP58_0.1	AI_TP58	20/12/2021	1	1	572	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	41	12	28	<0.1	10	24
AI_TP58_0.4	AI_TP58	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.9	<0.4	29	20	18	<0.1	18	31
AI_TP59_0.1	AI_TP59	20/12/2021	1	1	565	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.4	<0.4	23	7.6	28	<0.1	7.6	11
AI_TP59_0.4	AI_TP59	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	<0.4	22	23	12	<0.1	10	27
AI_TP60_0.1	AI_TP60	20/12/2021	1	1	619	0	1	1	0	0	0	0	0	0	0	-	1	1	0	8.7	<0.4	35	10	20	<0.1	9.1	24

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP60_0.5	AI_TP60	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	31	22	17	<0.1	12	32
AI_TP61_0.1	AI_TP61	20/12/2021	1	1	465	0	1	1	0	0	0	0	0	0	0	1	1	1	0	17	<0.4	42	17	30	<0.1	14	41
AI_TP61_0.4	AI_TP61	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	<0.4	40	23	29	<0.1	13	43
AI_TP62_0.1	AI_TP62	20/12/2021	1	1	839	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.3	<0.4	17	<5	13	<0.1	5.7	11
AI_TP62_0.4	AI_TP62	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7	<0.4	18	18	11	<0.1	8.3	25
AI_TP66_0.1	AI_TP66	17/12/2021	1	1	518	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.4	<0.4	18	18	19	<0.1	11	28
AI_TP66_0.4	AI_TP66	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	<0.4	20	24	13	<0.1	11	38
AI_TP67_0.1	AI_TP67	17/12/2021	1	1	697	0	1	1	0	0	0	0	0	0	0	1	1	1	0	14	<0.4	31	18	28	<0.1	13	40
AI_TP67_0.4	AI_TP67	17/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	<0.4	33	30	24	<0.1	14	64
AI_TP71_0.1	AI_TP71	20/12/2021	1	1	703	0	1	1	0	0	0	0	0	0	0	-	1	1	0	9.4	<0.4	20	8.8	26	<0.1	8.6	19
AI_TP71_0.4	AI_TP71	20/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.4	19	22	8.7	<0.1	7.8	24
AI_TP75_0.1	AI_TP75	21/12/2021	1	1	460	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.2	<0.4	13	16	17	<0.1	7.8	67
AI_TP75_0.4	AI_TP75	21/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5	<0.4	20	24	9.7	<0.1	7.1	33
AI_TP76_0.1	AI_TP76	21/12/2021	1	1	492	0	1	1	0	0	0	0	0	0	0	0	1	1	0	7.9	<0.4	19	17	27	<0.1	10	40
AI_TP76_0.4	AI_TP76	21/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	<0.4	20	21	13	<0.1	9.2	28
AI_TP78_0.1	AI_TP78	15/11/2021	1	1	324	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.5	<0.4	19	12	21	<0.1	5.6	19
AI_TP78_0.3	AI_TP78	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	<0.4	14	13	14	<0.1	5.6	18
AI_TP79_0.4	AI_TP79	21/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	<0.4	16	18	15	<0.1	9	26
AI_TP80_0.4	AI_TP80	21/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	<0.4	28	29	29	<0.1	18	45
AI_TP81_0.1	AI_TP81	21/12/2021	1	1	477	0	1	1	0	0	0	0	0	0	0	1	1	1	0	3.5	<0.4	11	15	16	<0.1	9.2	57
AI_TP81_0.4	AI_TP81	21/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.5	<0.4	14	18	12	<0.1	8	28
AI_TP82_0.1	AI_TP82	15/11/2021	1	1	578	0	1	1	0	0	0	0	0	0	0	1	1	1	0	16	<0.4	35	17	30	<0.1	10	41
AI_TP82_0.3	AI_TP82	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.3	<0.4	21	24	17	<0.1	11	31
AI_TP83_0.1	AI_TP83	15/11/2021	1	1	402	0	1	1	0	0	0	0	0	0	0	1	1	1	0	3.5	<0.4	7.7	15	9.2	<0.1	13	26
AI_TP83_0.3	AI_TP83	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2	<0.4	8.3	16	10	<0.1	10	38
AI_TP84_0.1	AI_TP84	15/11/2021	1	1	439	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.8	<0.4	18	19	25	<0.1	11	50
AI_TP84_0.3	AI_TP84	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	<0.4	14	17	16	<0.1	8.7	29
AI_TP85_0.3	AI_TP85	15/11/2021	1	1	528	0	1	1	0	0	0	0	0	0	0	1	1	1	0	9.2	<0.4	22	16	19	<0.1	10	33
AI_TP86_0.1	AI_TP86	21/12/2021	1	1	275	0	1	1	0	0	0	0	0	0	0	1	1	1	0	10	<0.4	24	26	24	<0.1	12	66
AI_TP86_0.4	AI_TP86	21/12/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	34	26	23	<0.1	15	72
AI_TP88_0.1	AI_TP88	15/11/2021	1	1	321	0	1	1	0	0	0	0	0	0	0	1	1	1	0	22	<0.4	49	20	36	<0.1	13	42
AI_TP88_0.3	AI_TP88	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	<0.4	53	22	30	<0.1	14	41
AI_TP89_0.1	AI_TP89	15/11/2021	1	1	511	0	1	1	0	0	0	0	0	0	0	1	1	1	0	13	<0.4	27	14	46	<0.1	10	14
AI_TP89_0.3	AI_TP89	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	<0.4	32	25	36	<0.1	11	36
AI_TP90_0.1	AI_TP90	15/11/2021	1	1	488	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.3	<0.4	11	8.9	11	<0.1	5.9	21
AI_TP90_0.3	AI_TP90	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.2	<0.4	16	14	20	<0.1	15	19

			Asbestos																	Heavy Metal							
			ACM - Comment	AF - Comment	Approximate Sample Mass	Asbestos from ACM in Soil	Asbestos Reported Result	FA- Comment	Mass ACM	Mass AF	Mass Asbestos in ACM	Mass asbestos in AF	Mass Asbestos in FA	Mass Asbestos in FA & AF	Mass FA	Respirable Fibres - Comment	Organic Fibres - Comment	Synthetic Fibres - Comment	Asbestos from FA & AF in Soil	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
			Comment	Comment	g	%w/w	Comment	Comment	g	g	g	g	g	g	g	Comment	g/kg	g/kg	% (w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL																				2	0.4	5	5	5	0.1	5	5
NEPM (1999) HSL A&B Residential - VI Clay 0 to <1 m																											
NEPM (1999) HSL A&B Residential - VI Clay 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Clay 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Clay 1 to <2 m																											
NEPM (1999) Management Limits - Commercial/Industrial (fine)																											
NEPM (1999) Management Limits - Urban residential & open space (fine)																											
NEPM (1999) HIL A - Residential (garden)																				100	20	100	6000	300	40	400	7400
NEPM (1999) HSL A Residential - Asbestos																			0.001								
NEPM (1999) HIL C - Recreation																				300	90	300	17000	600	80	1200	30000
NEPM (1999) HSL C Recreation - Asbestos																			0.001								
NEPM (1999) HIL D - Commercial/Industrial																				3000	900	3600	240000	1500	730	6000	400000
NEPM (1999) HSL D Comm/Indust - Asbestos																			0.001								
NEPM (1999) EIL - Urban Residential & Open Space																				100		190	60	1100		30	70
NEPM (1999) ESL - Urban Residential & Open Space (fine)																											
NEPM (1999) EIL - Commercial/Industrial																				160		310	85	1800		55	110
NEPM (1999) ESL - Commercial/Industrial (fine)																											
NEPM (1999) HSL B Residential - Asbestos																											
Field_ID	**LocCode**	**Sampled_Date-Time**																									
AI_TP91_0.1	AI_TP91	15/11/2021	1	1	359	0	1	1	0	0	0	0	0	0	0	1	1	1	0	5.9	<0.4	16	14	16	<0.1	12	42
AI_TP91_0.3	AI_TP91	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.3	<0.4	18	17	11	<0.1	9.3	25
AI_TP92_0.3	AI_TP92	15/11/2021	1	1	499	0	1	1	0	0	0	0	0	0	0	1	1	1	0	12	<0.4	32	20	16	<0.1	7.2	31
AI_TP92_0.5	AI_TP92	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	<0.4	15	26	17	<0.1	13	31
AI_TP93_0.3	AI_TP93	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<0.4	32	22	27	<0.1	13	44
AI_TP93_0.1	AI_TP93	8/11/2021	1	1	546	0	1	1	0	0	0	0	0	0	0	1	1	1	0	12	<0.4	37	19	27	<0.1	14	41
AI_TP94_0.3	AI_TP94	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	<0.4	29	53	34	<0.1	27	120
AI_TP94_0.1	AI_TP94	8/11/2021	1	1	473	0	1	1	0	0	0	0	0	0	0	1	1	1	0	6.8	<0.4	20	27	21	<0.1	22	61
AI_TP95_0.3	AI_TP95	8/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	<0.4	25	42	20	<0.1	27	98
AI_TP95_0.1	AI_TP95	8/11/2021	1	1	553	0	1	1	0	0	0	0	0	0	0	1	1	1	0	7.3	<0.4	16	20	23	<0.1	14	50
AI_TP96_0.1	AI_TP96	15/11/2021	1	1	550	0	1	1	0	0	0	0	0	0	0	1	1	1	0	11	<0.4	33	12	31	<0.1	7.7	30
AI_TP96_0.3	AI_TP96	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	<0.4	48	20	29	<0.1	12	34
AI_TP98_0.1	AI_TP98	15/11/2021	1	1	430	0	1	1	0	0	0	0	0	0	0	1	1	1	0	23	<0.4	52	33	32	<0.1	16	59
AI_TP98_0.3	AI_TP98	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	<0.4	48	21	29	<0.1	14	40
AI_TP99_0.3	AI_TP99	15/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	<0.4	13	11	16	<0.1	6	24
Statistical Summary																											
Number of Results			230	230	230	230	230	230	230	230	230	230	230	230	230	225	230	230	230	466	466	466	466	466	466	466	466
Number of Detects			230	230	230	230	230	230	230	230	230	230	230	230	230	225	230	230	230	461	0	463	459	460	2	444	464
Minimum Concentration			1	1	35	0	1	1	0	0	0	0	0	0	0	0	1	1	0	<2	<0.4	<5	<5	<5	<0.1	<5	<5
Minimum Detect			1	1	35	ND	1	1	ND	ND	ND	ND	ND	ND	ND	1	1	1	ND	2.1	ND	5.3	5.1	5.6	0.1	5.1	7.1
Maximum Concentration			1	1	869	0	1	1	0	0	0	0	0	0	0	1	1	1	0	37	<0.4	67	100	95	0.1	61	170
Maximum Detect			1	1	869	ND	1	1	ND	ND	ND	ND	ND	ND	ND	1	1	1	ND	37	ND	67	100	95	0.1	61	170
Average Concentration			1	1	488	0	1	1	0	0	0	0	0	0	0	0.98	1	1	0	9.5	0.2	24	21	21	0.05	11	36
Median Concentration			1	1	523	0	1	1	0	0	0	0	0	0	0	1	1	1	0	8.8	0.2	22	21	20	0.05	10	33
Standard Deviation			0	0	164	0	0	0	0	0	0	0	0	0	0	0.15	0	0	0	4.6	0	9.9	9.5	9.1	0.0033	6	20
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	26
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	26

			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.01	0.01	0.05	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.01	0.05	0.01	0.01
NEMP (2020) Freshwater - High conservation value systems (99%)											19											0.00023															
NEMP (2020) Freshwater - Slightly to moderately disturbed systems (95%)											220											0.13															
NEMP (2020) Drinking Water											0.56										0.07	0.07												0.07			
NEMP (2020) Recreational Water											10										2	2												2			
Field_ID	**WellCode**	**Sampled_Date-Time**																																				
MW01		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
MW02		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
MW03		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
MW04		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
MW05		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
MW06		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
MW07		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
MW08		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
MW09		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
MW10		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
MW11		24/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
Statistical Summary																																						
Number of Results			11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.005	0.005	0.025	0.005	0.025	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.05	0.005	0.025	0.005	0.005
Median Concentration			0.005	0.005	0.025	0.005	0.025	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.05	0.005	0.025	0.005	0.005
Standard Deviation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			Heavy Metal															
			Arsenic	Arsenic (Filtered)	Cadmium	Cadmium (Filtered)	Chromium (III+VI)	Chromium (III+VI) (Filtered)	Copper	Copper (Filtered)	Lead	Lead (Filtered)	Mercury	Mercury (Filtered)	Nickel	Nickel (Filtered)	Zinc	Zinc (Filtered)
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL			0.001	0.001	0.0002	0.0002	0.001	0.001	0.001	0.001	0.001	0.001	0.0001	0.0001	0.001	0.001	0.005	0.005
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems					0.0002	0.0002			0.0014	0.0014	0.0034	0.0034	0.00006	0.00006	0.011	0.011	0.008	0.008
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																	3	3
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)			0.01	0.01	0.002	0.002	0.05	0.05	2	2	0.01	0.01	0.001	0.001	0.02	0.02		
Field_ID	**WellCode**	**Sampled_Date-Time**																
MW01		24/06/2022	-	<0.001	-	<0.0002	-	<0.001	-	0.01	-	<0.001	-	<0.0001	-	0.004	-	0.014
MW02		24/06/2022	-	0.002	-	<0.0002	-	0.002	-	0.009	-	0.001	-	<0.0001	-	0.01	-	0.008
MW03		24/06/2022	-	<0.001	-	<0.0002	-	<0.001	-	0.004	-	0.003	-	<0.0001	-	0.005	-	0.17
MW04		24/06/2022	-	<0.001	-	<0.0002	-	<0.001	-	0.003	-	<0.001	-	<0.0001	-	0.003	-	0.009
MW05		24/06/2022	-	<0.001	-	<0.0002	-	<0.001	-	0.003	-	<0.001	-	<0.0001	-	0.001	-	0.011
MW06		24/06/2022	-	<0.001	-	<0.0002	-	<0.001	-	0.003	-	<0.001	-	<0.0001	-	0.003	-	0.006
MW07		24/06/2022	-	0.006	-	<0.0002	-	<0.001	-	0.002	-	<0.001	-	<0.0001	-	0.005	-	0.01
MW08		24/06/2022	-	0.006	-	<0.0002	-	<0.001	-	0.002	-	<0.001	-	<0.0001	-	0.006	-	0.039
MW09		24/06/2022	-	<0.001	-	<0.0002	-	<0.001	-	0.004	-	0.001	-	<0.0001	-	0.007	-	0.091
MW10		24/06/2022	-	<0.001	-	<0.0002	-	<0.001	-	0.004	-	<0.001	-	<0.0001	-	0.004	-	0.009
MW11		24/06/2022	-	<0.001	-	<0.0002	-	<0.001	-	0.003	-	<0.001	-	<0.0001	-	0.001	-	0.023
Statistical Summary																		
Number of Results			0	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11
Number of Detects			0	3	0	0	0	1	0	11	0	3	0	0	0	11	0	11
Minimum Concentration			99999	<0.001	99999	<0.0002	99999	<0.001	99999	0.002	99999	<0.001	99999	<0.0001	99999	0.001	99999	0.006
Minimum Detect			ND	0.002	ND	ND	ND	0.002	ND	0.002	ND	0.001	ND	ND	ND	0.001	ND	0.006
Maximum Concentration			0	0.006	0	<0.0002	0	0.002	0	0.01	0	0.003	0	<0.0001	0	0.01	0	0.17
Maximum Detect			ND	0.006	ND	ND	ND	0.002	ND	0.01	ND	0.003	ND	ND	ND	0.01	ND	0.17
Average Concentration				0.0016		0.0001		0.00064		0.0043		0.00082		0.00005		0.0045		0.035
Median Concentration				0.0005		0.0001		0.0005		0.003		0.0005		0.00005		0.004		0.011
Standard Deviation				0.0022		0		0.00045		0.0027		0.00075		0		0.0026		0.051
Number of Guideline Exceedances			0	0	0	0	0	0	0	11	0	0	0	11	0	0	0	10
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	10

			Organic																									
			>C10 - C40 Fraction (sum) (SG)	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a,j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene
			mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L
EQL			0.1	0.05	0.1	0.1	20	20	20	50	50	100	100	100	10	0.005	0.005	5	5	5	5	5	5	5	5	0.005	5	5
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems															16	0.002	0.003	3	5	85	160	8	260	60				16
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																							20					
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)									100		100	90	90		70					700	1500	400		40				0.5
Field_ID	**WellCode**	**Sampled_Date-Time**																										
MW01		24/06/2022	-	-	-	-	<20	<20	<20	<500	<500	<1000	<1000	<1000	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
MW02		24/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
MW03		24/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
MW04		24/06/2022	-	-	-	-	<20	<20	<20	<500	<500	<1000	<1000	<1000	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
MW05		24/06/2022	-	-	-	-	<20	<20	<20	<500	<500	<1000	<1000	<1000	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
MW06		24/06/2022	-	-	-	-	<20	<20	<20	60	60	<100	<100	<100	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
MW07		24/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
MW08		24/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
MW09		24/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
MW10		24/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
MW11		24/06/2022	-	-	-	-	<20	<20	<20	<50	<50	<100	<100	<100	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
Statistical Summary																												
Number of Results			0	0	0	0	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects			0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			99999	99999	99999	99999	<20	<20	<20	<50	<50	<100	<100	<100	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	60	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			0	0	0	0	<20	<20	<20	<500	<500	<1000	<1000	<1000	<10	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	60	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration							10	10	10	90	90	173	173	173	5	0.0025	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5
Median Concentration							10	10	10	25	25	50	50	50	5	0.0025	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5
Standard Deviation							0	0	0	104	104	210	210	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	3	11	11	0	0	11	11	11	0	0	0	0	0	0	0	0	0	11
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			SVOC																																			
			2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2-naphthylamine	2-nitroaniline	2-Picoline	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4,4-DDE	4-aminobiphenyl	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	MG/KG	µg/L
EQL			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0.005	5	5	5	5	10	10	10	3	3	0.03	3	3	3	10	0.006	5
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems																			0.001	8					1		10		3	120	2	0.045	34	340				
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																																						
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)					0.5								20				20	400	0.02		20	200		3000	10	70000	100		20	200			10	300				
Field_ID	**WellCode**	**Sampled_Date-Time**																																				
MW01		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
MW02		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
MW03		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
MW04		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
MW05		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
MW06		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
MW07		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
MW08		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
MW09		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
MW10		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
MW11		24/06/2022	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
Statistical Summary																																						
Number of Results			11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5	2.5	2.5	5	5	5	1.5	1.5	0.015	1.5	1.5	1.5	5	0.003	2.5
Median Concentration			2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5	2.5	2.5	5	5	5	1.5	1.5	0.015	1.5	1.5	1.5	5	0.003	2.5
Standard Deviation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11	0	0	0	11	0	11	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			DDD	DDT	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin	Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL			5	5	30	10	5	30	10	5	5	5	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0.005
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems				0.006				58	3.6	0.01	1000	3700	320	10						0.01			0.2	0.01		0.05			290	0.004	550				1.5			0.0026
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																																						
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)				9				30	10	0.02	300000		150	35					30	0.6			10	0.3	0.04	0.2	0.7	2000	10	20						30	70	0.09
Field_ID	**WellCode**	**Sampled_Date-Time**																																				
MW01		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW02		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW03		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW04		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW05		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW06		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW07		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW08		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW09		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW10		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW11		24/06/2022	<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
Statistical Summary																																						
Number of Results			11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<5	<5	<30	<10	<5	<30	<10	<5	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			2.5	2.5	15	5	2.5	15	5	2.5	2.5	2.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025
Median Concentration			2.5	2.5	15	5	2.5	15	5	2.5	2.5	2.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025
Standard Deviation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	11	0	0	11	11	11	11	11	0	0	11	0	0	0	0	11	0	0	11
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			TPH																											
			TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	TRH C10-C36 (Total) (after silica gel clean-up)	C10-C14	C15-C28	C29-C36	C10-C36	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone
			mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.05	0.1	0.1	0.1	50	100	100	100	5	5	1	1	1	1	0.003	1	1	1	1	1	1	1	1	1	1	1	1	5
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems														270	400	6500			700				160	1900	900		260	1100	60	
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																											20			
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)													10	400000	4	6		3	30	1000		1	1500	3	40	100000			40	40000
Field_ID	**WellCode**	**Sampled_Date-Time**																												
MW01		24/06/2022	-	-	-	-	500	<1000	<1000	<1000	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
MW02		24/06/2022	-	-	-	-	<50	<100	<100	<100	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
MW03		24/06/2022	-	-	-	-	<50	<100	<100	<100	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
MW04		24/06/2022	-	-	-	-	<500	<1000	<1000	<1000	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
MW05		24/06/2022	-	-	-	-	<500	<1000	<1000	<1000	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
MW06		24/06/2022	-	-	-	-	80	<100	<100	<100	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
MW07		24/06/2022	-	-	-	-	<50	<100	<100	<100	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
MW08		24/06/2022	-	-	-	-	<50	<100	<100	<100	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
MW09		24/06/2022	-	-	-	-	<50	<100	<100	<100	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
MW10		24/06/2022	-	-	-	-	<50	<100	<100	<100	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
MW11		24/06/2022	-	-	-	-	<50	<100	<100	<100	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
Statistical Summary																														
Number of Results			0	0	0	0	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects			0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			99999	99999	99999	99999	<50	<100	<100	<100	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
Minimum Detect			ND	ND	ND	ND	80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			0	0	0	0	500	<1000	<1000	<1000	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
Maximum Detect			ND	ND	ND	ND	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration							114	173	173	173	2.5	2.5	0.5	0.5	0.5	0.5	0.0015	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.5
Median Concentration							25	50	50	50	2.5	2.5	0.5	0.5	0.5	0.5	0.0015	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.5
Standard Deviation							156	210	210	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			VOC																			
			4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane
			µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			1	5	0.005	0.001	1	1	1	1	5	1	1	1	1	5	5	5	1	1	1	5
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems												20	240	55			370					
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																						
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)			1000				600	40	6	100	1		3	300	100		200	4000	100			10000
Field_ID	**WellCode**	**Sampled_Date-Time**																				
MW01		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
MW02		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
MW03		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
MW04		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
MW05		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
MW06		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
MW07		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
MW08		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
MW09		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
MW10		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
MW11		24/06/2022	<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
Statistical Summary																						
Number of Results			11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<1	<5	<0.005	<0.001	<1	<1	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.5	2.5	0.0025	0.0005	0.5	0.5	0.5	0.5	2.5	0.5	0.5	0.5	0.5	2.5	2.5	2.5	0.5	0.5	0.5	2.5
Median Concentration			0.5	2.5	0.0025	0.0005	0.5	0.5	0.5	0.5	2.5	0.5	0.5	0.5	0.5	2.5	2.5	2.5	0.5	0.5	0.5	2.5
Standard Deviation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

												Volatile					
		Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL		5	1	1	1	1	1	1	1	5	5	1	1	1	2	1	3
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems		4000		30		330	70				100	950	180	80		350	
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																	
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)		4		40000	30	8	50	1000		20000	0.3	1	800	300			600
Field_ID	**WellCode**	**Sampled_Date-Time**															
MW01		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
MW02		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
MW03		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
MW04		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
MW05		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
MW06		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
MW07		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
MW08		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
MW09		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
MW10		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
MW11		24/06/2022	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3

Statistical Summary

Number of Results	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	2.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.5	2.5	0.5	0.5	0.5	1	0.5	1.5
Median Concentration	2.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.5	2.5	0.5	0.5	0.5	1	0.5	1.5
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances	11	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL			2	2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.005
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems							0.001						0.006		0.01				0.01			0.2	0.01		0.05	0.004	0.0001
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																											
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)					20	20	0.02	0.3	20	0.2|2			9		0.02			30	0.6			10	0.3	0.04	0.2	20	0.0003
Field_ID	**WellCode**	**Sampled_Date-Time**																									
MW01		24/06/2022	<10	<10	<5	<5	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.1
MW02		24/06/2022	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01
MW03		24/06/2022	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01
MW04		24/06/2022	<10	<10	<5	<5	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.1
MW05		24/06/2022	<10	<10	<5	<5	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.1
MW06		24/06/2022	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01
MW07		24/06/2022	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01
MW08		24/06/2022	<10	<10	<5	<5	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.1
MW09		24/06/2022	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
MW10		24/06/2022	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.01
MW11		24/06/2022	<2	<2	<0.2	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.01
Statistical Summary																											
Number of Results			11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<10	<10	<5	<5	<5	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.1
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			2.5	2.5	1	1.1	1.1	1.1	1.1	2.5	1.1	1	1	1	1	1	1	1	1	1	1	1.1	1.1	1.1	1.1	1	0.021
Median Concentration			1	1	0.25	0.25	0.25	0.25	0.25	1	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.005
Standard Deviation			2	2	1.2	1.1	1.1	1.1	1.1	2	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.2	0.023
Number of Guideline Exceedances			0	0	0	0	11	10	0	4	0	0	11	0	11	0	0	0	11	0	0	10	11	11	11	11	11
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			OPP																																	
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL			0.002	2	2	20	2	0.002	20	2	2	2	2	2	2	2	2	2	2	2	2	2	0.002	2	2	2	2	20	2	2	0.02	2	2	2	2	0.002
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems				0.01			0.01					0.01		0.15				0.2				0.05							0.004							
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																																				
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)				30	10	2	10	0.01			0.15	4	5	7	4	4	1	7	10	7		70		0.7	5	2		1	20	2	0.09	20		0.9		0.1
Field_ID	**WellCode**	**Sampled_Date-Time**																																		
MW01		24/06/2022	<0.005	<5	<5	<20	<50	<0.005	<50	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<20	<5	<5	<0.05	<5	<5	<5	<5	<0.005
MW02		24/06/2022	<0.005	<5	<5	<20	<50	<0.005	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<20	<5	<5	<0.05	<5	<5	<5	<5	<0.005
MW03		24/06/2022	<0.005	<5	<5	<20	<50	<0.005	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<20	<5	<5	<0.05	<5	<5	<5	<5	<0.005
MW04		24/06/2022	<0.005	<5	<5	<20	<50	<0.005	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<20	<5	<5	<0.05	<5	<5	<5	<5	<0.005
MW05		24/06/2022	<0.005	<5	<5	<20	<50	<0.005	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<20	<5	<5	<0.05	<5	<5	<5	<5	<0.005
MW06		24/06/2022	<0.005	<5	<5	<20	<50	<0.005	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<20	<5	<5	<0.05	<5	<5	<5	<5	<0.005
MW07		24/06/2022	<0.005	<5	<5	<20	<50	<0.005	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<20	<5	<5	<0.05	<5	<5	<5	<5	<0.005
MW08		24/06/2022	<0.02	<20	<20	<20	<500	<0.02	<500	<20	<500	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<0.02	<20	<20	<20	<20	<20	<20	<20	<0.5	<20	<20	<20	<20	<0.02
MW09		24/06/2022	<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
MW10		24/06/2022	<0.005	<5	<5	<20	<50	<0.005	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<20	<5	<5	<0.05	<5	<5	<5	<5	<0.005
MW11		24/06/2022	<0.005	<5	<5	<20	<50	<0.005	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<20	<5	<5	<0.05	<5	<5	<5	<5	<0.005
Statistical Summary																																				
Number of Results			11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<0.02	<20	<20	<20	<500	<0.02	<500	<20	<500	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<0.02	<20	<20	<20	<20	<20	<20	<20	<0.5	<20	<20	<20	<20	<0.02
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.003	3	3	10	43	0.003	44	3	27	3	3	3	3	3	3	3	3	3	3	3	0.003	3	3	3	3	10	3	3	0.044	3	3	3	3	0.003
Median Concentration			0.0025	2.5	2.5	10	25	0.0025	25	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5	2.5	2.5	10	2.5	2.5	0.025	2.5	2.5	2.5	2.5	0.0025
Standard Deviation			0.0024	2.4	2.4	0	69	0.0024	68	2.4	74	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0.0024	2.4	2.4	2.4	2.4	0	2.4	2.4	0.068	2.4	2.4	2.4	2.4	0.0024
Number of Guideline Exceedances			0	11	1	11	11	1	0	0	11	11	1	11	10	10	11	11	1	1	0	11	0	11	1	10	0	11	11	10	1	0	0	11	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			PAH																
			Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)
			µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			1	1	1	1	1	0.001	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems					0.01		0.1						1			16	0.6		
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																			
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)			2000		150		0.01							10000		70	150	150	
Field_ID	**WellCode**	**Sampled_Date-Time**																	
MW01		24/06/2022	<1	<1	<1	2	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2
MW02		24/06/2022	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW03		24/06/2022	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW04		24/06/2022	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW05		24/06/2022	<1	<1	<1	2	<1	<0.001	<1	<1	1	<1	<1	<1	<1	<1	1	<1	4
MW06		24/06/2022	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW07		24/06/2022	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW08		24/06/2022	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW09		24/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW10		24/06/2022	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW11		24/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Statistical Summary

Number of Results	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Detects	0	0	0	2	0	0	0	0	1	0	0	0	0	0	1	0	2
Minimum Concentration	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Minimum Detect	ND	ND	ND	2	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	1	ND	2
Maximum Concentration	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Maximum Detect	ND	ND	ND	2	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	1	ND	4
Average Concentration	1.8	1.8	1.8	2	1.8	0.0018	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.2
Median Concentration	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Standard Deviation	1	1	1	0.79	1	0.001	1	1	0.96	1	1	1	1	1	0.96	1	0.98
Number of Guideline Exceedances	0	0	11	0	11	0	0	0	0	0	7	0	0	0	11	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

Field_ID	WellCode	Sampled_Date-Time	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			PFAS																																			
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.01	0.01	0.05	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.01	0.05	0.01	0.01
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)													0.56								0.07		0.07											0.07			
NEMP (2020) Freshwater - High conservation value systems (99%)													19										0.00023														
NEMP (2020) Freshwater - Slightly to moderately disturbed systems (95%)													220										0.13														
NEMP (2020) Drinking Water													0.56								0.07		0.07											0.07			
NEMP (2020) Recreational Water													10								2		2											2			
SW1		21/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
SW10		21/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	0.02	<0.05	0.02	0.02
SW2		21/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	0.02	<0.05	0.02	0.01
SW4		21/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
SW5		21/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
SW6		21/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
SW7		21/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
SW8		21/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
SW9		21/06/2022	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	0.01	<0.05	0.01	0.01

Statistical Summary

Number of Results	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
Minimum Concentration	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.05	<0.01	<0.01
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	0.02	ND	ND	0.02	ND	ND	ND	ND	ND	ND	0.01	ND	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	ND	0.01	0.01
Maximum Concentration	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	0.02	<0.05	0.02	0.02
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	0.02	ND	ND	0.02	ND	ND	ND	ND	ND	ND	0.01	ND	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	ND	0.02	0.02
Average Concentration	0.005	0.005	0.025	0.005	0.025	0.005	0.005	0.005	0.0067	0.005	0.005	0.0067	0.005	0.005	0.005	0.005	0.005	0.005	0.0056	0.005	0.0078	0.005	0.005	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.05	0.0089	0.025	0.0089	0.0078
Median Concentration	0.005	0.005	0.025	0.005	0.025	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.05	0.005	0.025	0.005	0.005
Standard Deviation	0	0	0	0	0	0	0	0	0.005	0	0	0.005	0	0	0	0	0	0	0.0017	0	0.0051	0	0	0	0	0	0	0	0	0	0	0.0065	0	0.0065	0.0051
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects On	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			OCP																								
			Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL			2	2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.005
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems							0.001						0.006		0.01				0.01			0.2	0.01		0.05	0.004	0.0001
NEPM (1999) GIL - Drinking Water								0.3		2			9									10	0.3				
NEPM (1999) GIL - Freshwater													0.006						0.01			0.2	0.01				0.0001
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																											
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)					20	20	0.02	0.3	20	0.2|2			9		0.02			30	0.6			10	0.3	0.04	0.2	20	0.0003
Field_ID	**WellCode**	**Sampled_Date-Time**																									
SW1		21/06/2022	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
SW10		21/06/2022	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
SW2		21/06/2022	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
SW4		21/06/2022	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
SW5		21/06/2022	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
SW6		21/06/2022	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
SW7		21/06/2022	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
SW8		21/06/2022	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
SW9		21/06/2022	<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
Statistical Summary																											
Number of Results			9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.005
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			1	1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0025
Median Concentration			1	1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0025
Standard Deviation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	0	0	9	0	0	0	0	0	9	0	9	0	0	0	9	0	0	0	9	9	9	9	9
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			OPP																																	
			Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL			0.002	2	2	20	2	0.002	20	2	2	2	2	2	2	2	2	2	2	2	2	2	0.002	2	2	2	2	20	2	2	0.02	2	2	2	2	0.002
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems				0.01			0.01					0.01		0.15				0.2				0.05							0.004							
NEPM (1999) GIL - Drinking Water				30	10	2	10					4	5	7	4	4	1	7		7		70		0.7	6			1	20		0.09	20		0.9		
NEPM (1999) GIL - Freshwater							0.01					0.01		0.15				0.2				0.05							0.004							
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																																				
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)				30	10	2	10	0.01			0.15	4	5	7	4	4	1	7	10	7		70		0.7	5	2		1	20	2	0.09	20		0.9		0.1
Field_ID	**WellCode**	**Sampled_Date-Time**																																		
SW1		21/06/2022	<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
SW10		21/06/2022	<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
SW2		21/06/2022	<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
SW4		21/06/2022	<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
SW5		21/06/2022	<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
SW6		21/06/2022	<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
SW7		21/06/2022	<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
SW8		21/06/2022	<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
SW9		21/06/2022	<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
Statistical Summary																																				
Number of Results			9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<0.002	<2	<2	<20	<2	<0.002	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<20	<2	<2	<0.02	<2	<2	<2	<2	<0.002
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.001	1	1	10	1	0.001	10	1	1	1	1	1	1	1	1	1	1	1	1	1	0.001	1	1	1	1	10	1	1	0.01	1	1	1	1	0.001
Median Concentration			0.001	1	1	10	1	0.001	10	1	1	1	1	1	1	1	1	1	1	1	1	1	0.001	1	1	1	1	10	1	1	0.01	1	1	1	1	0.001
Standard Deviation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	9	0	9	9	0	0	0	9	9	0	9	0	0	9	9	0	0	0	9	0	9	0	0	0	9	9	0	0	0	0	9	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			PAH																
			Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)
			µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			1	1	1	1	1	0.001	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems					0.01		0.1						1			16	0.6		
NEPM (1999) GIL - Drinking Water							0.01												
NEPM (1999) GIL - Freshwater																16			
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																			
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)			2000		150		0.01							10000		70	150	150	
Field_ID	**WellCode**	**Sampled_Date-Time**																	
SW1		21/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SW10		21/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SW2		21/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SW4		21/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SW5		21/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SW6		21/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SW7		21/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SW8		21/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SW9		21/06/2022	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Statistical Summary																			
Number of Results			9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.5	0.5	0.5	0.5	0.5	0.0005	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Median Concentration			0.5	0.5	0.5	0.5	0.5	0.0005	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Standard Deviation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	9	0	9	0	0	0	0	0	0	0	0	0	9	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			Heavy Metal								Organic								
			Arsenic (Filtered)	Cadmium (Filtered)	Chromium (III+VI) (Filtered)	Copper (Filtered)	Lead (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Zinc (Filtered)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Naphthalene
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.001	0.0002	0.001	0.001	0.001	0.0001	0.001	0.005	20	20	20	50	50	100	100	100	10
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems				0.0002		0.0014	0.0034	0.00006	0.011	0.008									16
NEPM (1999) GIL - Drinking Water			0.01	0.002		2	0.01	0.001	0.02										
NEPM (1999) GIL - Freshwater			0.013	0.0002	0.001	0.0014	0.0034	0.00006	0.011	0.008									16
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)										3									
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)			0.01	0.002	0.05	2	0.01	0.001	0.02				100		100	90	90		70
Field_ID	**WellCode**	**Sampled_Date-Time**																	
SW1		21/06/2022	<0.001	<0.0002	<0.001	0.023	0.003	<0.0001	0.006	0.042	<20	<20	<20	<50	<50	<100	<100	<100	<10
SW10		21/06/2022	<0.001	<0.0002	<0.001	0.01	0.001	<0.0001	0.012	0.056	<20	<20	<20	<50	<50	<100	<100	<100	<10
SW2		21/06/2022	<0.001	<0.0002	<0.001	0.002	<0.001	<0.0001	0.002	<0.005	<20	<20	<20	<50	<50	<100	<100	<100	<10
SW4		21/06/2022	0.004	<0.0002	<0.001	0.04	0.004	<0.0001	0.009	0.079	<20	<20	<20	<50	<50	<100	<100	<100	<10
SW5		21/06/2022	0.001	<0.0002	<0.001	0.009	<0.001	<0.0001	0.008	0.052	<20	<20	<20	<50	<50	<100	<100	<100	<10
SW6		21/06/2022	<0.001	<0.0002	<0.001	0.015	0.001	<0.0001	0.011	0.042	20	30	30	<50	<50	<100	<100	<100	<10
SW7		21/06/2022	<0.001	<0.0002	<0.001	0.007	<0.001	<0.0001	0.003	0.027	<20	<20	<20	<50	<50	<100	<100	<100	<10
SW8		21/06/2022	0.001	<0.0002	<0.001	0.026	0.002	<0.0001	0.006	0.046	<20	<20	<20	<50	<50	<100	<100	<100	<10
SW9		21/06/2022	<0.001	<0.0002	<0.001	0.012	0.001	<0.0001	0.006	0.094	<20	<20	<20	<50	<50	<100	<100	<100	<10

Statistical Summary

Number of Results	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects	3	0	0	9	6	0	9	8	1	1	1	0	0	0	0	0	0
Minimum Concentration	<0.001	<0.0002	<0.001	0.002	<0.001	<0.0001	0.002	<0.005	<20	<20	<20	<50	<50	<100	<100	<100	<10
Minimum Detect	0.001	ND	ND	0.002	0.001	ND	0.002	0.027	20	30	30	ND	ND	ND	ND	ND	ND
Maximum Concentration	0.004	<0.0002	<0.001	0.04	0.004	<0.0001	0.012	0.094	20	30	30	<50	<50	<100	<100	<100	<10
Maximum Detect	0.004	ND	ND	0.04	0.004	ND	0.012	0.094	20	30	30	ND	ND	ND	ND	ND	ND
Average Concentration	0.001	0.0001	0.0005	0.016	0.0015	0.00005	0.007	0.049	11	12	12	25	25	50	50	50	5
Median Concentration	0.0005	0.0001	0.0005	0.012	0.001	0.00005	0.006	0.046	10	10	10	25	25	50	50	50	5
Standard Deviation	0.0011	0	0	0.012	0.0013	0	0.0034	0.027	3.3	6.7	6.7	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	0	9	1	9	2	8	0	0	0	0	0	9	9	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	9	1	0	2	8	0	0	0	0	0	0	0	0	0

Field_ID	WellCode	Sampled_Date-Time	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1-naphthylamine	Dibenz(a.j)acridine	1-Chloronaphthalene	2,4-Dinitrotoluene	2-chloronaphthalene	2-methylnaphthalene	2,6-dinitrotoluene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2-naphthylamine	2-nitroaniline	2-Picoline	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4,4-DDE	4-aminobiphenyl	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	a-BHC	Acetophenone	Aldrin	Aniline	b-BHC	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate
			mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.005	0.005	5	5	5	5	5	5	5	5	0.005	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0.005	5	5	5	5
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems			0.002	0.003	3	5	85	160	8	260	60				16																	0.001	8					1	
NEPM (1999) GIL - Drinking Water								1500			40																											10	
NEPM (1999) GIL - Freshwater					3		85	160		260	60																						8						
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)										20																													
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)							700	1500	400		40				0.5			0.5								20				20	400	0.02		20	200		3000	10	70000
SW1		21/06/2022	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5
SW10		21/06/2022	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5
SW2		21/06/2022	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5
SW4		21/06/2022	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5
SW5		21/06/2022	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5
SW6		21/06/2022	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5
SW7		21/06/2022	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5
SW8		21/06/2022	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5
SW9		21/06/2022	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5

Statistical Summary

Number of Results	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<5	<5	<5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.0025	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5	2.5	2.5
Median Concentration	0.0025	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5	2.5	2.5
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances	9	9	9	0	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	0	
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			SVOC																			
			2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3&4-Methylphenol (m&p-Cresol)	d-BHC	DDD	DDT	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	Dibenzofuran	4-Nitrophenol	Pentachlorophenol	Dieldrin
			µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	MG/KG	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			10	10	10	3	3	0.03	3	3	3	10	0.006	5	5	5	30	10	5	30	10	5
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems			10		3	120	2	0.045	34	340						0.006				58	3.6	0.01
NEPM (1999) GIL - Drinking Water					20	200				300						9					10	
NEPM (1999) GIL - Freshwater			10		3	120		0.045		340						0.006					3.6	
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																						
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)			100		20	200			10	300						9				30	10	0.02
Field_ID	**WellCode**	**Sampled_Date-Time**																				
SW1		21/06/2022	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5
SW10		21/06/2022	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5
SW2		21/06/2022	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5
SW4		21/06/2022	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5
SW5		21/06/2022	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5
SW6		21/06/2022	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5
SW7		21/06/2022	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5
SW8		21/06/2022	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5
SW9		21/06/2022	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5

Statistical Summary

Number of Results	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<10	<10	<10	<3	<3	<0.03	<3	<3	<3	<10	<0.006	<5	<5	<5	<30	<10	<5	<30	<10	<5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	5	5	5	1.5	1.5	0.015	1.5	1.5	1.5	5	0.003	2.5	2.5	2.5	15	5	2.5	15	5	2.5
Median Concentration	5	5	5	1.5	1.5	0.015	1.5	1.5	1.5	5	0.003	2.5	2.5	2.5	15	5	2.5	15	5	2.5
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	9	0	9	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

																																TPH			
		Diethylphthalate	Dimethyl phthalate	Phenol	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Methoxychlor	Nitrobenzene	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin	C10-C14	C15-C28	C29-C36	C10-C36
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L
EQL		5	5	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0.005	50	100	100	100
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems		1000	3700	320	10						0.01			0.2	0.01		0.05			290	0.004	550				1.5			0.0026				
NEPM (1999) GIL - Drinking Water														10	0.3			0.7									30	70	0.09				
NEPM (1999) GIL - Freshwater		1000	3700	320	10						0.01			0.2	0.01					290									0.0026				
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																																	
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)		300000		150	35					30	0.6			10	0.3	0.04	0.2	0.7	2000	10	20						30	70	0.09				
Field_ID	**WellCode**	**Sampled_Date-Time**																																	
SW1		21/06/2022	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
SW10		21/06/2022	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
SW2		21/06/2022	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
SW4		21/06/2022	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
SW5		21/06/2022	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
SW6		21/06/2022	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
SW7		21/06/2022	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
SW8		21/06/2022	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
SW9		21/06/2022	<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
Statistical Summary																																	
Number of Results		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration		<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
Minimum Detect		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration		<5	<5	<3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<0.005	<50	<100	<100	<100
Maximum Detect		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration		2.5	2.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	25	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	25	50	50	50
Median Concentration		2.5	2.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	25	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	25	50	50	50
Standard Deviation		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances		0	0	0	0	0	0	0	0	0	9	0	0	9	9	9	9	9	0	0	9	0	0	0	0	9	0	0	9	0	0	0	0
Number of Guideline Exceedances(Detects Only)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			VOC																									
			Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	Total MAH	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	Methyl Ethyl Ketone	4-chlorotoluene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Bromobenzene	Bromochloromethane
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L
EQL			5	5	1	1	1	1	0.003	1	1	1	1	1	1	1	1	1	1	1	1	5	1	5	0.005	0.001	1	1
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems						270	400	6500			700				160	1900	900		260	1100	60							
NEPM (1999) GIL - Drinking Water											30				1500	3					40							
NEPM (1999) GIL - Freshwater								6500							160				260		60							
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																			20									
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)					10	400000	4	6		3	30	1000		1	1500	3	40	100000			40	40000	1000				600	40
Field_ID	**WellCode**	**Sampled_Date-Time**																										
SW1		21/06/2022	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1
SW10		21/06/2022	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1
SW2		21/06/2022	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1
SW4		21/06/2022	<5	<5	<1	<1	<1	<1	0.005	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1
SW5		21/06/2022	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1
SW6		21/06/2022	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1
SW7		21/06/2022	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1
SW8		21/06/2022	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1
SW9		21/06/2022	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1

Statistical Summary

Number of Results	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<5	<5	<1	<1	<1	<1	<0.003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1
Minimum Detect	ND	ND	ND	ND	ND	ND	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<5	<5	<1	<1	<1	<1	0.005	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<0.005	<0.001	<1	<1
Maximum Detect	ND	ND	ND	ND	ND	ND	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	2.5	2.5	0.5	0.5	0.5	0.5	0.0019	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.5	0.5	2.5	0.0025	0.0005	0.5	0.5
Median Concentration	2.5	2.5	0.5	0.5	0.5	0.5	0.0015	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.5	0.5	2.5	0.0025	0.0005	0.5	0.5
Standard Deviation	0	0	0	0	0	0	0.0012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

																											Volatile					
		Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Iodomethane	Isopropylbenzene	Styrene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL		1	1	5	1	1	1	1	5	5	5	1	1	1	5	5	1	1	1	1	1	1	1	5	5	1	1	1	2	1	3
ANZG (2018) Freshwater - Slightly to moderately disturbed ecosystems					20	240	55			370						4000		30		330	70				100	950	180	80		350	
NEPM (1999) GIL - Drinking Water				1		3	300									4			30		50				0.3	1	800	300			600
NEPM (1999) GIL - Freshwater																										950				350	
NHMRC (2011) Recommended Drinking Water Guidelines - Aesthetic (Ver 3.5)																															
NHMRC (2011) Recommended Drinking Water Guidelines - Health (Ver 3.5)		6	100	1		3	300	100		200	4000	100			10000	4		40000	30	8	50	1000		20000	0.3	1	800	300			600
Field_ID	**WellCode**	**Sampled_Date-Time**																														
SW1		21/06/2022	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
SW10		21/06/2022	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
SW2		21/06/2022	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
SW4		21/06/2022	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	5	<1	<2	<1	<3
SW5		21/06/2022	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	1	<1	<2	<1	<3
SW6		21/06/2022	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
SW7		21/06/2022	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
SW8		21/06/2022	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
SW9		21/06/2022	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3

Statistical Summary

Number of Results	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Minimum Concentration	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<2	<1	<3
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND
Maximum Concentration	<1	<1	<5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	5	<1	<2	<1	<3
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	ND	ND
Average Concentration	0.5	0.5	2.5	0.5	0.5	0.5	0.5	2.5	2.5	2.5	0.5	0.5	0.5	2.5	2.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.5	2.5	0.5	1.1	0.5	1	0.5	1.5
Median Concentration	0.5	0.5	2.5	0.5	0.5	0.5	0.5	2.5	2.5	2.5	0.5	0.5	0.5	2.5	2.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.5	2.5	0.5	0.5	0.5	1	0.5	1.5
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	0	0	0	0
Number of Guideline Exceedances	0	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			PFAS																																			
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid	N-methylperfluorooctanesulfonamidoethanol	Perfluorooctane sulfonamide (PFOSA)	Sum of PFAS	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	10	5	5	50	5	10	5	5
NEMP (2020) HIL A - Residential with garden/accessible soil													100								10		10											10			
NEMP (2020) HIL C - Public open space													10000								1000		1000											1000			
NEMP (2020) HIL D - Industrial/ commercial													50000								20000		20000											20000			
NEMP (2020) Ecological (direct exposure)													10000										1000														
NEMP (2020) Ecological (indirect exposure)																							10														
NEMP (2020) HIL B - Residential with minimal opportunities for soil access													20000								2000		2000											2000			
Field_ID	**LocCode**	**Sampled_Date-Time**																																				
SED1	SED1	21/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
SED10	SED10	21/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
SED2	SED2	21/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
SED3	SED3	21/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
SED4	SED4	21/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
SED5	SED5	21/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
SED6	SED6	21/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
SED7	SED7	21/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
SED8	SED8	21/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
SED9	SED9	21/06/2022	<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
Statistical Summary																																						
Number of Results			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<5	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<10	<5	<5	<50	<5	<10	<5	<5
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			2.5	2.5	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5	2.5	2.5	5	2.5	2.5	25	2.5	5	2.5	2.5
Median Concentration			2.5	2.5	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5	2.5	2.5	5	2.5	2.5	25	2.5	5	2.5	2.5
Standard Deviation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Well ID	Gauging Date	Event	Screened interval (mbTOC)	Total Measured Depth (mbTOC)	Depth to PSH (mbTOC)	Depth to Water (mbTOC)	Depth to Water (mAHD)	PSH Thickness (m)	Well Condition/Comments
MW01	24/Jun/22	GME	10.1 - 13.1	13.560	--	4.53	64.923	--	grey-brown, very turbid, no odour.
MW02	24/Jun/22	GME	5.5 - 8.5	13.685	--	2.388	62.959	--	Clear, no odour.
MW03	24/Jun/22	GME	4.5 - 7.5	8.668	--	2.856	62.869	--	Clear, no odour.
MW04	24/Jun/22	GME	10.2 - 13.2	13.208	--	5.959	68.774	--	grey-brown, very turbid, no odour.
MW05	24/Jun/22	GME	7.4 - 10.4	9.149	--	3.684	60.506	--	Brown, turbid, no odour.
MW06	24/Jun/22	GME	2.0 - 5.0	--	--	3.215	62.132	--	Orange-brown, very turbid, no odour.
MW07	24/Jun/22	GME	14.0 - 21.5	20.008	--	9.721	71.803	--	Clear, no odour.
MW08	24/Jun/22	GME	5.1 - 8.1	9.022	--	2.110	74.537	--	Clear, no odour.
MW09	24/Jun/22	GME	8.9 - 11.9	10.072	--	2.482	63.763	--	Clear, no odour.
MW10	24/Jun/22	GME	8.85 - 11.85	12.950	--	3.651	64.894	--	
MW11	24/Jun/22	GME	2.9 - 5.9	6.465	--	5.671	55.278	--	No odour.

Well ID	DO (mg/L)	EC (µScm-¹)	pH	Eh (mV)	Temp. (°C)	Comments
MW01	0.50	23684	6.98	-45	16.2	
MW02	0.62	24267	6.89	-55.9	15.8	
MW03	1.48	15,970	7.29	-30.3	15.4	
MW04	27.90	15298	6.73	-3.7	15.0	
MW05	1.57	17592	6.90	-69.3	16.7	
MW06	1.80	11688	6.74	11.9	16.1	
MW07	0.68	18836	6.83	-51.4	16.4	
MW08	10.90	18719	6.84	-17.2	15.3	
MW09	3.71	18880	7.19	-2.3	15.9	
MW10	1.38	18728	6.77	-0.5	17.0	
MW11	1.19	16466	7.27	-35.7	16.2	

Notes:

MW	Monitoring Well	Equipment:	YSI-20M101183
DO	Dissolved Oxygen		
mg/L	milligrams per litre		
EC	Electrical Conductivity	Operator:	Miranda Dimmick / Indiana Strachan
μScm^{-1}	microsiemens per centimetre		
Eh	Redox		
mV	millivolts		
L	Litres		

Filter: SDG in('15 Feb 2022','09 Feb 2022','14 Feb 2022')

		Lab Report Number	900392	900392		900799	900799		900799	900799	
		Field ID	SW2	D01_20220621	**RPD**	MW05	D01_20220624	**RPD**	MW04	D02_20220624	**RPD**
		Sampled Date/Time	21/06/2022	21/06/2022		24/06/2022	24/06/2022		24/06/2022	24/06/2022	
ChemName	**Units**	**EQL**									
C6-C10	µg/l	20	<20.0	<20.0	0	<20.0	<20.0	0			
C6-C10 (F1 minus BTEX)	µg/l	20	<20.0	<20.0	0	<20.0	<20.0	0			
C10-C16	µg/l	50	<50.0	<50.0	0	<500.0	50.0	0			
C10-C16 (F2 minus Naphthalene)	µg/l	50	<50.0	<50.0	0	<500.0	50.0	0			
C16-C34	µg/l	100	<100.0	<100.0	0	<1000.0	<100.0	0			
C34-C40	µg/l	100	<100.0	<100.0	0	<1000.0	<100.0	0			
C10-C40 (Sum of total)	µg/l	100	<100.0	<100.0	0	<1000.0	<100.0	0			
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorohexanoic acid (PFHxA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorooctanoic acid (PFOA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.01	0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorononanesulfonic acid (PFNS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.01	0.01	0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
N-ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-methyl perfluorooctane sulfonamide (NMeFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-methylperfluorooctane sulfonamidoacetic acid	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-methylperfluorooctanesulfonamidoethanol	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Sum of PFAS	µg/L	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Sum of PFHxS and PFOS	µg/L	0.01	0.02	0.02	0	<0.01	<0.01	0	<0.01	<0.01	0
Sum of PFAS (WA DER List)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.01	0.02	0.02	0	<0.01	<0.01	0	<0.01	<0.01	0
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	0.01	0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
2,3,4,6-Tetrachlorophenol	µg/l	10	<10.0	<10.0	0	<10.0	<10.0	0			
2,4,5-Trichlorophenol	µg/l	10	<10.0	<10.0	0	<10.0	<10.0	0			
2,4,6-Trichlorophenol	µg/l	10	<10.0	<10.0	0	<10.0	<10.0	0			
2,4-Dichlorophenol	µg/l	3	<3.0	<3.0	0	<3.0	<3.0	0			
2,4-Dimethylphenol	µg/l	3	<3.0	<3.0	0	<3.0	<3.0	0			
2,4-Dinitrophenol	mg/l	0.03	<0.03	<0.03	0	<0.03	<0.03	0			
2,6-Dichlorophenol	µg/l	3	<3.0	<3.0	0	<3.0	<3.0	0			
2-Chlorophenol	µg/l	3	<3.0	<3.0	0	<3.0	<3.0	0			
2-Methylphenol	µg/l	3	<3.0	<3.0	0	<3.0	<3.0	0			
2-Nitrophenol	µg/l	10	<10.0	<10.0	0	<10.0	<10.0	0			
3&4-Methylphenol (m&p-Cresol)	MG/K	0.006	<0.006	<0.006	0	<0.006	<0.006	0			
4,6-Dinitro-2-methylphenol	µg/l	30	<30.0	<30.0	0	<30.0	<30.0	0			
4-chloro-3-methylphenol	µg/l	10	<10.0	<10.0	0	<10.0	<10.0	0			
4-Nitrophenol	µg/l	30	<30.0	<30.0	0	<30.0	<30.0	0			
Pentachlorophenol	µg/l	10	<10.0	<10.0	0	<10.0	<10.0	0			
Phenol	µg/l	3	<3.0	<3.0	0	<3.0	<3.0	0			
N-nitrosodi-n-butylamine	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
N-nitrosodi-n-propylamine	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
1-naphthylamine	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
2-naphthylamine	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Diphenylamine	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
2-nitroaniline	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Aniline	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			

Filter: SDG in('15 Feb 2022','09 Feb 2022','14 Feb 2022')

Lab Report Number			900392	900392		900799	900799		900799	900799	
Field ID			SW2	D01_20220621	**RPD**	MW05	D01_20220624	**RPD**	MW04	D02_20220624	**RPD**
Sampled Date/Time			21/06/2022	21/06/2022		24/06/2022	24/06/2022		24/06/2022	24/06/2022	
ChemName	**Units**	**EQL**									
Benzene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Toluene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Ethylbenzene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Xylene (m & p)	µg/l	2	<2.0	<2.0	0	<2.0	<2.0	0			
Xylene (o)	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Xylene Total	µg/l	3	<3.0	<3.0	0	<3.0	<3.0	0			
Benzyl chloride	mg/l	0.005	<0.005	<0.005	0	<0.005	<0.005	0			
Hexachlorobutadiene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Hexachlorocyclopentadiene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Hexachloroethane	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Chlorinated hydrocarbons EPAVic	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Other chlorinated hydrocarbons EPAVic	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
1,1,1,2-tetrachloroethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,1,1-trichloroethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,1,2,2-tetrachloroethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,1,2-trichloroethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,1-dichloroethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,1-dichloroethene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,2,3-trichloropropane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,2-dichloroethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,2-dichloropropane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,3-dichloropropane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Bromochloromethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Bromodichloromethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Bromoform	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Carbon tetrachloride	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Chlorodibromomethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Chloroethane	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Chloroform	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Chloromethane	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
cis-1,2-dichloroethene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
cis-1,3-dichloropropene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Dibromomethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Dichloromethane	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Trichloroethene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Tetrachloroethene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
trans-1,2-dichloroethene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
trans-1,3-dichloropropene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Vinyl chloride	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
2,4-Dinitrotoluene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
2,6-dinitrotoluene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Nitrobenzene	µg/l	50	<50.0	<50.0	0						
Nitrobenzene	µg/l	5				<5.0	<5.0	0			
Hexachlorobenzene	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
1,2,3,4-tetrachlorobenzene	mg/l	0.005	<0.005	<0.005	0	<0.005	<0.005	0			
1,2,3,5-Tetrachlorobenzene	mg/l	0.005	<0.005	<0.005	0	<0.005	<0.005	0			
1,2,3-trichlorobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
1,2,4,5-tetrachlorobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
1,2,4-trichlorobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
1,2-dichlorobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
1,3,5-Trichlorobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
1,3-dichlorobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
1,4-dichlorobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Hexachlorobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Pentachlorobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
1,2-dichlorobenzene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,3-dichlorobenzene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,4-dichlorobenzene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
4-chlorotoluene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Bromobenzene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			

Filter: SDG in('15 Feb 2022','09 Feb 2022','14 Feb 2022')

		Lab Report Number	900392	900392		900799	900799		900799	900799	
		Field ID	SW2	D01_20220621	**RPD**	MW05	D01_20220624	**RPD**	MW04	D02_20220624	**RPD**
		Sampled Date/Time	21/06/2022	21/06/2022		24/06/2022	24/06/2022		24/06/2022	24/06/2022	
ChemName	**Units**	**EQL**									
Chlorobenzene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,2-dibromoethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Bromomethane	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Dichlorodifluoromethane	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Iodomethane	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Trichlorofluoromethane	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Pronamide	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Trifluralin	mg/l	0.005	<0.005	<0.005	0	<0.005	<0.005	0			
Total MAH	mg/l	0.003	<0.003	<0.003	0	<0.003	<0.003	0			
1,2,4-trimethylbenzene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
1,3,5-trimethylbenzene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Isopropylbenzene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Styrene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Arsenic (Filtered)	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0			
Cadmium (Filtered)	mg/l	0.0002	<0.0002	<0.0002	0	<0.0002	<0.0002	0			
Chromium (III+VI) (Filtered)	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0			
Copper (Filtered)	mg/l	0.001	**0.002**	**0.01**	**133**	**0.003**	**<0.001**	**100**			
Lead (Filtered)	mg/l	0.001	<0.001	0.001	0	<0.001	<0.001	0			
Mercury (Filtered)	mg/l	0.0001	<0.0001	<0.0001	0	<0.0001	<0.0001	0			
Nickel (Filtered)	mg/l	0.001	**0.002**	**0.012**	**143**	0.001	<0.001	0			
Zinc (Filtered)	mg/l	0.005	**<0.005**	**0.054**	**166**	0.011	0.009	20			
2-Picoline	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
4-aminobiphenyl	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Pentachloronitrobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Organochlorine pesticides EPAVic	µg/l	2	<2.0	<2.0	0	<10.0	<2.0	0			
Other organochlorine pesticides EPAVic	µg/l	2	<2.0	<2.0	0	<10.0	<2.0	0			
4,4-DDE	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
a-BHC	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Aldrin	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Aldrin + Dieldrin	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
b-BHC	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
chlordane	µg/l	2	<2.0	<2.0	0	<10.0	<2.0	0			
d-BHC	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
DDD	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
DDT	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
DDT+DDE+DDD	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Dieldrin	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Endosulfan I	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			

Filter: SDG in('15 Feb 2022','09 Feb 2022','14 Feb 2022')

Lab Report Number			900392	900392		900799	900799		900799	900799	
Field ID			SW2	D01_20220621	**RPD**	MW05	D01_20220624	**RPD**	MW04	D02_20220624	**RPD**
Sampled Date/Time			21/06/2022	21/06/2022		24/06/2022	24/06/2022		24/06/2022	24/06/2022	
ChemName	**Units**	**EQL**									
Endosulfan II	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Endosulfan sulphate	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Endrin	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Endrin aldehyde	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Endrin ketone	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
g-BHC (Lindane)	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Heptachlor	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Heptachlor epoxide	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Methoxychlor	µg/l	0.2	<0.2	<0.2	0	<5.0	<0.2	0			
Toxaphene	mg/l	0.005	<0.005	<0.005	0	<0.1	<0.005	0			
4,4-DDE	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
a-BHC	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Aldrin	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
b-BHC	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
d-BHC	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
DDD	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
DDT	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Dieldrin	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Endosulfan I	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Endosulfan II	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Endosulfan sulphate	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Endrin	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Endrin aldehyde	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Endrin ketone	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
g-BHC (Lindane)	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Heptachlor	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Heptachlor epoxide	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Methoxychlor	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Tokuthion	mg/l	0.002	<0.002	<0.002	0	<0.005	<0.002	0			
Azinophos methyl	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Bolstar (Sulprofos)	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Chlorfenvinphos	µg/l	20	<20.0	<20.0	0	<20.0	<20.0	0			
Chlorpyrifos	µg/l	2	<2.0	<2.0	0	<50.0	<2.0	0			
Chlorpyrifos-methyl	mg/l	0.002	<0.002	<0.002	0	<0.005	<0.002	0			
Coumaphos	µg/l	20	<20.0	<20.0	0	<50.0	<20.0	0			
Demeton-O	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Demeton-S	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Diazinon	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Dichlorvos	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Dimethoate	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Disulfoton	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Ethion	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Ethoprop	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Fenitrothion	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Fensulfothion	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Fenthion	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
EPN	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Malathion	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Merphos	mg/l	0.002	<0.002	<0.002	0	<0.005	<0.002	0			
Methyl parathion	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Mevinphos (Phosdrin)	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Monocrotophos	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Naled (Dibrom)	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Omethoate	µg/l	20	<20.0	<20.0	0	<20.0	<20.0	0			
Phorate	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Pyrazophos	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Ronnel	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			

Filter: SDG in('15 Feb 2022','09 Feb 2022','14 Feb 2022')

		Lab Report Number	900392	900392		900799	900799		900799	900799	
		Field ID	SW2	D01_20220621	**RPD**	MW05	D01_20220624	**RPD**	MW04	D02_20220624	**RPD**
		Sampled Date/Time	21/06/2022	21/06/2022		24/06/2022	24/06/2022		24/06/2022	24/06/2022	
ChemName	**Units**	**EQL**									
Terbufos	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Trichloronate	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Tetrachlorvinphos	mg/l	0.002	<0.002	<0.002	0	<0.005	<0.002	0			
Acetophenone	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Naphthalene	µg/l	10	<10.0	<10.0	0	<10.0	<10.0	0			
Acenaphthene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Acenaphthylene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Anthracene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Benz(a)anthracene	µg/l	1	<1.0	<1.0	0	2.0	<1.0	67			
Benzo(a) pyrene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Benzo(b+j)fluoranthene	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0			
Benzo(g,h,i)perylene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Benzo(k)fluoranthene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Chrysene	µg/l	1	<1.0	<1.0	0	1.0	<1.0	0			
Dibenz(a,h)anthracene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Fluoranthene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Fluorene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Indeno(1,2,3-c,d)pyrene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Naphthalene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
Phenanthrene	µg/l	1	<1.0	<1.0	0	1.0	<1.0	0			
Pyrene	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
PAHs (Sum of total)	µg/l	1	<1.0	<1.0	0	**4.0**	**<1.0**	**120**			
1-Chloronaphthalene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
2-chloronaphthalene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
2-methylnaphthalene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
3-methylcholanthrene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
7,12-dimethylbenz(a)anthracene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Parathion	µg/l	2	<2.0	<2.0	0	<5.0	<2.0	0			
Pirimiphos-methyl	mg/l	0.02	<0.02	<0.02	0	<0.05	<0.02	0			
Bis(2-ethylhexyl) phthalate	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Butyl benzyl phthalate	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Diethylphthalate	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Dimethyl phthalate	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Di-n-butyl phthalate	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Di-n-octyl phthalate	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Methyl Ethyl Ketone	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
4-Methyl-2-pentanone	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Acetone	mg/l	0.005	<0.005	<0.005	0	<0.005	<0.005	0			
Allyl chloride	mg/l	0.001	<0.001	<0.001	0	<0.001	<0.001	0			
Carbon disulfide	µg/l	1	<1.0	<1.0	0	<1.0	<1.0	0			
3,3-Dichlorobenzidine	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
4-(dimethylamino) azobenzene	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
4-bromophenyl phenyl ether	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
4-chlorophenyl phenyl ether	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Bis(2-chloroethoxy) methane	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Bis(2-chloroisopropyl) ether	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
Dibenzofuran	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
N-nitrosopiperidine	µg/l	5	<5.0	<5.0	0	<5.0	<5.0	0			
C6-C9	µg/l	20	<20.0	<20.0	0	<20.0	<20.0	0			
C10-C14	µg/l	50	<50.0	<50.0	0	<500.0	110.0	0			
C15-C28	µg/l	100	<100.0	<100.0	0	<1000.0	<100.0	0			
C29-C36	µg/l	100	<100.0	<100.0	0	<1000.0	<100.0	0			
C10-C36	µg/l	100	<100.0	<100.0	0	<1000.0	110.0	0			
Dibenz(a,j)acridine	mg/l	0.005	<0.005	<0.005	0	<0.005	<0.005	0			

Field Duplicates (SOIL)			**Lab Report Number**	900392	900392	
			Field ID	SED2	D01_20220621	**RPD**
			Sampled Date/Time	21/06/2022	21/06/2022	
Method_Type	**ChemName**	**Units**	**EQL**			
PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/kg	5	<5.0	<5.0	0
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/kg	5	<5.0	<5.0	0
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/kg	10	<10.0	<10.0	0
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/kg	5	<5.0	<5.0	0
	Perfluorobutanoic acid (PFBA)	µg/kg	5	<5.0	<5.0	0
	Perfluorodecanoic acid (PFDA)	µg/kg	5	<5.0	<5.0	0
	Perfluorododecanoic acid (PFDoDA)	µg/kg	5	<5.0	<5.0	0
	Perfluoroheptanoic acid (PFHpA)	µg/kg	5	<5.0	<5.0	0
	Perfluorohexanoic acid (PFHxA)	µg/kg	5	<5.0	<5.0	0
	Perfluorononanoic acid (PFNA)	µg/kg	5	<5.0	<5.0	0
	Perfluorooctanoic acid (PFOA)	µg/kg	5	<5.0	<5.0	0
	Perfluoropentanoic acid (PFPeA)	µg/kg	5	<5.0	<5.0	0
	Perfluorotetradecanoic acid (PFTeDA)	µg/kg	5	<5.0	<5.0	0
	Perfluorotridecanoic acid (PFTrDA)	µg/kg	5	<5.0	<5.0	0
	Perfluoroundecanoic acid (PFUnDA)	µg/kg	5	<5.0	<5.0	0
	Perfluorobutane sulfonic acid (PFBS)	µg/kg	5	<5.0	<5.0	0
	Perfluorodecanesulfonic acid (PFDS)	µg/kg	5	<5.0	<5.0	0
	Perfluoroheptane sulfonic acid (PFHpS)	µg/kg	5	<5.0	<5.0	0
	Perfluorohexane sulfonic acid (PFHxS)	µg/kg	5	<5.0	<5.0	0
	Perfluorononanesulfonic acid (PFNS)	µg/kg	5	<5.0	<5.0	0
	Perfluorooctanesulfonic acid (PFOS)	µg/kg	5	<5.0	<5.0	0
	Perfluoropentane sulfonic acid (PFPeS)	µg/kg	5	<5.0	<5.0	0
	Perfluoropropanesulfonic acid (PFPrS)	µg/kg	5	<5.0	<5.0	0
	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/kg	5	<5.0	<5.0	0
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/kg	10	<10.0	<10.0	0
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/kg	5	<5.0	<5.0	0
	N-methyl perfluorooctane sulfonamide (NMeFOSA)	µg/kg	5	<5.0	<5.0	0
	N-methylperfluorooctane sulfonamidoacetic acid	µg/kg	10	<10.0	<10.0	0
	N-methylperfluorooctanesulfonamidoethanol	µg/kg	5	<5.0	<5.0	0
	Perfluorooctane sulfonamide (PFOSA)	µg/kg	5	<5.0	<5.0	0
	Sum of PFAS	µg/kg	50	<50.0	<50.0	0
	Sum of PFHxS and PFOS	µg/kg	5	<5.0	<5.0	0
	Sum of PFAS (WA DER List)	µg/kg	10	<10.0	<10.0	0
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/kg	5	<5.0	<5.0	0
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	5	<5.0	<5.0	0
Inorganic	Moisture Content (dried @ 103°C)	%	1	46.0	46.0	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 80 (1-10 x EQL); 50 (10-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary la

			Lab Report Number	838534	838534		838535	838536		838535	838536		838536	838536		838536	838536		838537	838538		838534	ES2140544	
			Field ID	AI_TP239_0.3	AI_20211101_D03	RPD	AI_TP214_0.3	AI_20211102_D01	RPD	AI_TP208_0.3	AI_20211102_D02	RPD	AI_TP203_0.1	AI_20211102_D03	RPD	AI_TP201_0.3	AI_20211102_D04	RPD	AI_TP226_0.1	AI_20211103_D01	RPD	AI_TP239_0.3	20211101_T03	RPD
			Sampled Date/Time	1/11/2021	1/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		3/11/2021	3/11/2021		1/11/2021	1/11/2021	
Method_Type	**ChemName**	**Units**	**EQL**																					
Organic	C6-C10	mg/kg	20 (Primary): 10 (Interlab)				<20.0	<20.0	0				<20.0	<20.0	0				<20.0	<20.0	0			
	C6-C10 (F1 minus BTEX)	mg/kg	20 (Primary): 10 (Interlab)				<20.0	<20.0	0				<20.0	<20.0	0				<20.0	<20.0	0			
	C10-C16	mg/kg	50				<50.0	<50.0	0				<50.0	<50.0	0				<50.0	<50.0	0			
	C10-C16 (F2 minus Naphthalene)	mg/kg	50				<50.0	<50.0	0				<50.0	<50.0	0				<50.0	<50.0	0			
	C16-C34	mg/kg	100				<100.0	<100.0	0				<100.0	<100.0	0				<100.0	<100.0	0			
	C34-C40	mg/kg	100				<100.0	<100.0	0				<100.0	<100.0	0				<100.0	<100.0	0			
	C10-C40 (Sum of total)	mg/kg	100 (Primary): 50 (Interlab)				<100.0	<100.0	0				<100.0	<100.0	0				<100.0	<100.0	0			
PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/kg	10 (Primary): 0.5 (Interlab)	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.5	0
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	Perfluorobutanoic acid (PFBA)	µg/kg	5 (Primary): 1 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<1.0	0
	Perfluorodecanoic acid (PFDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorododecanoic acid (PFDoDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluoroheptanoic acid (PFHpA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorohexanoic acid (PFHxA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorononanoic acid (PFNA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorooctanoic acid (PFOA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluoropentanoic acid (PFPeA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorotetradecanoic acid (PFTeDA)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	Perfluorotridecanoic acid (PFTrDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluoroundecanoic acid (PFUnDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorobutane sulfonic acid (PFBS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorodecanesulfonic acid (PFDS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluoroheptane sulfonic acid (PFHpS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorohexane sulfonic acid (PFHxS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorononanesulfonic acid (PFNS)	µg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	Perfluorooctanesulfonic acid (PFOS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluoropentane sulfonic acid (PFPeS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluoropropanesulfonic acid (PFPrS)	µg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/kg	10 (Primary): 0.2 (Interlab)	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.2	0
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	N-methyl perfluorooctane sulfonamide (NMeFOSA)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	N-methylperfluorooctane sulfonamidoacetic acid	µg/kg	10 (Primary): 0.2 (Interlab)	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.2	0
	N-methylperfluorooctanesulfonamidoethanol	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	Perfluorooctane sulfonamide (PFOSA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Sum of PFAS	µg/kg	50 (Primary): 0.2 (Interlab)	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<0.2	0
	Sum of PFHxS and PFOS	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Sum of PFAS (WA DER List)	µg/kg	10 (Primary): 0.2 (Interlab)	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.2	0
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
SVOC	2,3,4,6-Tetrachlorophenol	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	2,4,5-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)				<1.0	<1.0	0				<1.0	<1.0	0				<1.0	<1.0	0			
	2,4,6-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)				<1.0	<1.0	0				<1.0	<1.0	0				<1.0	<1.0	0			
	2,4-Dichlorophenol	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	2,4-Dimethylphenol	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<2.5	0			
	2,4-Dinitrophenol	mg/kg	5				<5.0	<5.0	0				<5.0	<5.0	0				<5.0	<5.0	0			
	2,6-Dichlorophenol	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	2-Chlorophenol	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	2-Methylphenol	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	2-Nitrophenol	mg/kg	1 (Primary): 0.5 (Interlab)				<1.0	<1.0	0				<1.0	<1.0	0				<1.0	<1.0	0			
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4				<0.4	<0.4	0				<0.4	<0.4	0				<0.4	<0.4	0			
	4,6-Dinitro-2-methylphenol	mg/kg	5				<5.0	<5.0	0				<5.0	<5.0	0				<5.0	<5.0	0			
	4-chloro-3-methylphenol	mg/kg	1 (Primary): 0.5 (Interlab)				<1.0	<1.0	0				<1.0	<1.0	0				<1.0	<1.0	0			
	4-Nitrophenol	mg/kg	5				<5.0	<5.0	0				<5.0	<5.0	0				<5.0	<5.0	0			
	Pentachlorophenol	mg/kg	1				<1.0	<1.0	0				<2.0	<1.0	0				<1.0	<1.0	0			
	Phenol	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	N-nitrosodi-n-butylamine	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	N-nitrosodi-n-propylamine	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1-naphthylamine	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	2-naphthylamine	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<1.0	<0.5	0			
	Diphenylamine	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	2-nitroaniline	mg/kg	1				<1.0	<1.0	0				<1.0	<1.0	0				<1.0	<1.0	0			
	Aniline	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
Volatile	Benzene	mg/kg	0.1 (Primary): 0.2 (Interlab)				<0.1						<0.1	<0.1	0									
	Toluene	mg/kg	0.1 (Primary): 0.5 (Interlab)				<0.1						<0.1	<0.1	0									
	Ethylbenzene	mg/kg	0.1 (Primary): 0.5 (Interlab)				<0.1						<0.1	<0.1	0									
	Xylene (m & p)	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2						<0.2	<0.2	0									
	Xylene (o)	mg/kg	0.1 (Primary): 0.5 (Interlab)				<0.1						<0.1	<0.1	0									
	Xylene Total	mg/kg	0.3 (Primary): 0.5 (Interlab)				<0.3						<0.3	<0.3	0									
SVOC	Benzyl chloride	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Hexachlorobutadiene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Hexachlorocyclopentadiene	mg/kg	1 (Primary): 2.5 (Interlab)				<1.0	<1.0	0				<1.0	<1.0	0				<1.0	<1.0	0			
	Hexachloroethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
VOC	Chlorinated hydrocarbons EPAVic	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Other chlorinated hydrocarbons EPAVic	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,1,1,2-tetrachloroethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,1,1-trichloroethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,1,2,2-tetrachloroethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,1,2-trichloroethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			

			Lab Report Number	838534	838534		838535	838536		838535	838536		838536	838536		838536	838536		838537	838538		838534	ES2140544	
			Field ID	AI_TP239_0.3	AI_20211101_D03	**RPD**	AI_TP214_0.3	AI_20211102_D01	**RPD**	AI_TP208_0.3	AI_20211102_D02	**RPD**	AI_TP203_0.1	AI_20211102_D03	**RPD**	AI_TP201_0.3	AI_20211102_D04	**RPD**	AI_TP226_0.1	AI_20211103_D01	**RPD**	AI_TP239_0.3	20211101_T03	**RPD**
			Sampled Date/Time	1/11/2021	1/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		3/11/2021	3/11/2021		1/11/2021	1/11/2021	
Method_Type	**ChemName**	**Units**	**EQL**																					
	1,1-dichloroethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,1-dichloroethene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,2,3-trichloropropane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,2-dichloroethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,2-dichloropropane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,3-dichloropropane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Bromochloromethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Bromodichloromethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Bromoform	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Carbon tetrachloride	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Chlorodibromomethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Chloroethane	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Chloroform	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Chloromethane	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	cis-1,2-dichloroethene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	cis-1,3-dichloropropene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Dibromomethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Dichloromethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Trichloroethene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Tetrachloroethene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	trans-1,2-dichloroethene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	trans-1,3-dichloropropene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Vinyl chloride	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
SVOC	2,4-Dinitrotoluene	mg/kg	0.5 (Primary): 1 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	2,6-dinitrotoluene	mg/kg	1				<1.0	<1.0	0				<1.0	<1.0	0				<1.0	<1.0	0			
	Nitrobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
OCP	Hexachlorobenzene	mg/kg	0.05 (Primary): 1 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
SVOC	1,2,3,4-tetrachlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,2,3,5-Tetrachlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,2,3-trichlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,2,4,5-tetrachlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,2,4-trichlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,2-dichlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,3,5-Trichlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,3-dichlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,4-dichlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Hexachlorobenzene	mg/kg	0.5 (Primary): 1 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Pentachlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
VOC	1,2-dichlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,3-dichlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,4-dichlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	4-chlorotoluene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Bromobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Chlorobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,2-dibromoethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Bromomethane	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Dichlorodifluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Iodomethane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Trichlorofluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
SVOC	Pronamide	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Trifluralin	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
Inorganic	Moisture Content (dried @ 103°C)	%	1	17.0	16.0	6	18.0	16.0	12	18.0	18.0	0	15.0	17.0	13	17.0	15.0	13	16.0	18.0	12	17.0		
VOC	Total MAH	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,2,4-trimethylbenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	1,3,5-trimethylbenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Isopropylbenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Styrene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
Heavy Metal	Arsenic	mg/kg	2 (Primary): 5 (Interlab)				4.4	3.7	17				**4.8**	**12.0**	**86**				8.4	9.5	12			
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)				<0.4	<0.4	0				<0.4	<0.4	0				<0.4	<0.4	0			
	Chromium (III+VI)	mg/kg	5 (Primary): 2 (Interlab)				21.0	16.0	27				**13.0**	**35.0**	**92**				20.0	24.0	18			
	Copper	mg/kg	5				22.0	17.0	26				5.4	9.6	56				14.0	16.0	13			
	Lead	mg/kg	5				16.0	9.9	47				13.0	29.0	76				23.0	24.0	4			
	Mercury	mg/kg	0.1				<0.1	<0.1	0				<0.1	<0.1	0				<0.1	<0.1	0			
	Nickel	mg/kg	5 (Primary): 2 (Interlab)				13.0	6.2	71				<5.0	9.3	60				12.0	12.0	0			
	Zinc	mg/kg	5				21.0	17.0	21				8.8	19.0	73				30.0	29.0	3			
SVOC	2-Picoline	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	4-aminobiphenyl	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Pentachloronitrobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
OCP	Organochlorine pesticides EPAVic	mg/kg	0.1				<0.1	<0.1	0				<0.1	<0.1	0				<0.1	<0.1	0			
	Other organochlorine pesticides EPAVic	mg/kg	0.1				<0.1	<0.1	0				<0.1	<0.1	0				<0.1	<0.1	0			
	4,4-DDE	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	a-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Aldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Aldrin + Dieldrin	mg/kg	0.05				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	b-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	chlordane	mg/kg	0.1 (Primary): 0.05 (Interlab)				<0.1	<0.1	0				<0.1	<0.1	0				<0.1	<0.1	0			

			Lab Report Number	838534	838534		838535	838536		838535	838536		838536	838536		838536	838536		838537	838538		838534	ES2140544	
			Field ID	AI_TP239_0.3	AI_20211101_D03	**RPD**	AI_TP214_0.3	AI_20211102_D01	**RPD**	AI_TP208_0.3	AI_20211102_D02	**RPD**	AI_TP203_0.1	AI_20211102_D03	**RPD**	AI_TP201_0.3	AI_20211102_D04	**RPD**	AI_TP226_0.1	AI_20211103_D01	**RPD**	AI_TP239_0.3	20211101_T03	**RPD**
			Sampled Date/Time	1/11/2021	1/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		3/11/2021	3/11/2021		1/11/2021	1/11/2021	
Method_Type	**ChemName**	**Units**	**EQL**																					
	d-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	DDD	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	DDT	mg/kg	0.05 (Primary): 1 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	DDT+DDE+DDD	mg/kg	0.05				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Dieldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Endosulfan I	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Endosulfan II	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Endosulfan sulphate	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Endrin	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Endrin aldehyde	mg/kg	0.05				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Endrin ketone	mg/kg	0.05				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	g-BHC (Lindane)	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Heptachlor	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Heptachlor epoxide	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Methoxychlor	mg/kg	0.05 (Primary): 0.2 (Interlab)				<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0			
	Toxaphene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
SVOC	4,4-DDE	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	a-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Aldrin	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	b-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	d-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	DDD	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	DDT	mg/kg	1 (Primary): 0.2 (Interlab)				<1.0	<1.0	0				<1.0	<1.0	0				<1.0	<1.0	0			
	Dieldrin	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Endosulfan I	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Endosulfan II	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Endosulfan sulphate	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Endrin	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Endrin aldehyde	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Endrin ketone	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	g-BHC (Lindane)	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Heptachlor	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Heptachlor epoxide	mg/kg	0.5 (Primary): 0.05 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Methoxychlor	mg/kg	0.5 (Primary): 0.2 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
OPP	Tokuthion	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Azinophos methyl	mg/kg	0.2 (Primary): 0.05 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Bolstar (Sulprofos)	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Chlorfenvinphos	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Chlorpyrifos	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Chlorpyrifos-methyl	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Coumaphos	mg/kg	2				<2.0	<2.0	0				<2.0	<2.0	0				<2.0	<2.0	0			
	Demeton-O	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Demeton-S	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Diazinon	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Dichlorvos	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Dimethoate	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Disulfoton	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Ethion	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Ethoprop	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Fenitrothion	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Fensulfothion	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Fenthion	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	EPN	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Malathion	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Merphos	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Methyl parathion	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Mevinphos (Phosdrin)	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Monocrotophos	mg/kg	2 (Primary): 0.2 (Interlab)				<2.0	<2.0	0				<2.0	<2.0	0				<2.0	<2.0	0			
	Naled (Dibrom)	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Omethoate	mg/kg	2				<2.0	<2.0	0				<2.0	<2.0	0				<2.0	<2.0	0			
	Phorate	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Pyrazophos	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Ronnel	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Terbufos	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Trichloronate	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Tetrachlorvinphos	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
SVOC	Acetophenone	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
Organic	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
PAH	Acenaphthene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Acenaphthylene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Anthracene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Benz(a)anthracene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0									
	Benzo(a) pyrene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0									
	Benzo(b+j)fluoranthene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0									
	Benzo(g,h,i)perylene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0									
	Benzo(k)fluoranthene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0									
	Chrysene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Dibenz(a,h)anthracene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0									
	Fluoranthene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Fluorene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0									

			Lab Report Number	838534	838534		838535	838536		838535	838536		838536	838536		838536	838536		838537	838538		838534	ES2140544	
			Field ID	AI_TP239_0.3	AI_20211101_D03	**RPD**	AI_TP214_0.3	AI_20211102_D01	**RPD**	AI_TP208_0.3	AI_20211102_D02	**RPD**	AI_TP203_0.1	AI_20211102_D03	**RPD**	AI_TP201_0.3	AI_20211102_D04	**RPD**	AI_TP226_0.1	AI_20211103_D01	**RPD**	AI_TP239_0.3	20211101_T03	**RPD**
			Sampled Date/Time	1/11/2021	1/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		3/11/2021	3/11/2021		1/11/2021	1/11/2021	
Method_Type	**ChemName**	**Units**	**EQL**																					
	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Phenanthrene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Pyrene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5				0.6	0.6	0				0.6	0.6	0									
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5				1.2	1.2	0				1.2	1.2	0									
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	PAHs (Sum of total)	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
SVOC	1-Chloronaphthalene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	2-chloronaphthalene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	2-methylnaphthalene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	3-methylcholanthrene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	7,12-dimethylbenz(a)anthracene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
OPP	Parathion	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
	Pirimiphos-methyl	mg/kg	0.2				<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0			
SVOC	Bis(2-ethylhexyl) phthalate	mg/kg	5				<5.0	<5.0	0				<5.0	<5.0	0				<5.0	<5.0	0			
	Butyl benzyl phthalate	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Diethylphthalate	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Dimethyl phthalate	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Di-n-butyl phthalate	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Di-n-octyl phthalate	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
VOC	Methyl Ethyl Ketone	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	4-Methyl-2-pentanone	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Acetone	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Allyl chloride	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Carbon disulfide	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
SVOC	3,3-Dichlorobenzidine	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	4-(dimethylamino) azobenzene	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	4-bromophenyl phenyl ether	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	4-chlorophenyl phenyl ether	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Bis(2-chloroethoxy) methane	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Bis(2-chloroisopropyl) ether	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	Dibenzofuran	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
	N-nitrosopiperidine	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			
Organic	C6-C9	mg/kg	20 (Primary): 10 (Interlab)				<20.0	<20.0	0				<20.0	<20.0	0				<20.0	<20.0	0			
TPH	C10-C14	mg/kg	20 (Primary): 50 (Interlab)				<20.0	<20.0	0				<20.0	<20.0	0				<20.0	<20.0	0			
	C15-C28	mg/kg	50 (Primary): 100 (Interlab)				<50.0	<50.0	0				<50.0	<50.0	0				<50.0	<50.0	0			
	C29-C36	mg/kg	50 (Primary): 100 (Interlab)				<50.0	<50.0	0				<50.0	<50.0	0				<50.0	<50.0	0			
	C10-C36	mg/kg	50				<50.0	<50.0	0				<50.0	<50.0	0				<50.0	<50.0	0			
SVOC	Dibenz(a,j)acridine	mg/kg	0.5				<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0			

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 80 (1-10 x EQL); 50 (10-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

			Lab Report Number	838535	ES2141124		838535	ES2141124		838536	ES2141124		838536	ES2141124		841164	841164		841164	841164		853609	853609		841164
			Field ID	AI_TP214_0.3	20211102_T01	RPD	AI_TP208_0.3	20211102_T02	RPD	AI_TP203_0.1	20211102_T03	RPD	AI_TP201_0.3	20211102_T04	RPD	AI_TP145_0.1	AI_20211108_D01	RPD	AI_TP112_0.1	AI_20211108_D02	RPD	AI_TP55-0.1	AI_20211109-D01	RPD	AI_TP145_0.1
			Sampled Date/Time	2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		8/11/2021	8/11/2021		8/11/2021	8/11/2021		9/11/2021	9/11/2021		8/11/2021
Method_Type	**ChemName**	**Units**	**EQL**																						
Organic	C6-C10	mg/kg	20 (Primary): 10 (Interlab)	<20.0	<10.0	0				<20.0	<10.0	0				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0
	C6-C10 (F1 minus BTEX)	mg/kg	20 (Primary): 10 (Interlab)	<20.0	<10.0	0				<20.0	<10.0	0				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0
	C10-C16	mg/kg	50	<50.0	<50.0	0				<50.0	<50.0	0				<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0
	C10-C16 (F2 minus Naphthalene)	mg/kg	50	<50.0	<50.0	0				<50.0	<50.0	0				<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0
	C16-C34	mg/kg	100	<100.0	<100.0	0				<100.0	<100.0	0				<100.0	140.0	33	<100.0	120.0	18	<100.0	<100.0	0	<100.0
	C34-C40	mg/kg	100	<100.0	<100.0	0				<100.0	<100.0	0				<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0
	C10-C40 (Sum of total)	mg/kg	100 (Primary): 50 (Interlab)	<100.0	<50.0	0				<100.0	<50.0	0				<100.0	140.0	33	<100.0	120.0	18	<100.0	<100.0	0	<100.0
PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/kg	10 (Primary): 0.5 (Interlab)	<10.0	<0.5	0	<10.0	<0.5	0	<10.0	<0.5	0	<10.0	<0.5	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorobutanoic acid (PFBA)	µg/kg	5 (Primary): 1 (Interlab)	<5.0	<1.0	0	<5.0	<1.0	0	<5.0	<1.0	0	<5.0	<1.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorodecanoic acid (PFDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorododecanoic acid (PFDoDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluoroheptanoic acid (PFHpA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorohexanoic acid (PFHxA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorononanoic acid (PFNA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorooctanoic acid (PFOA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluoropentanoic acid (PFPeA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorotetradecanoic acid (PFTeDA)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorotridecanoic acid (PFTrDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluoroundecanoic acid (PFUnDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorobutane sulfonic acid (PFBS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorodecanesulfonic acid (PFDS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluoroheptane sulfonic acid (PFHpS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorohexane sulfonic acid (PFHxS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorononanesulfonic acid (PFNS)	µg/kg	5	<5.0			<5.0			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorooctanesulfonic acid (PFOS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluoropentane sulfonic acid (PFPeS)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluoropropanesulfonic acid (PFPrS)	µg/kg	5	<5.0			<5.0			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/kg	10 (Primary): 0.2 (Interlab)	<10.0	<0.2	0	<10.0	<0.2	0	<10.0	<0.2	0	<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	N-methyl perfluorooctane sulfonamide (NMeFOSA)	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	N-methylperfluorooctane sulfonamidoacetic acid	µg/kg	10 (Primary): 0.2 (Interlab)	<10.0	<0.2	0	<10.0	<0.2	0	<10.0	<0.2	0	<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0
	N-methylperfluorooctanesulfonamidoethanol	µg/kg	5 (Primary): 0.5 (Interlab)	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Perfluorooctane sulfonamide (PFOSA)	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Sum of PFAS	µg/kg	50 (Primary): 0.2 (Interlab)	<50.0	<0.2	0	<50.0	<0.2	0	<50.0	<0.2	0	<50.0	<0.2	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0
	Sum of PFHxS and PFOS	µg/kg	5 (Primary): 0.2 (Interlab)	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Sum of PFAS (WA DER List)	µg/kg	10 (Primary): 0.2 (Interlab)	<10.0			<10.0			<10.0			<10.0			<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/kg	5	<5.0			<5.0			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	5	<5.0			<5.0			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
SVOC	2,3,4,6-Tetrachlorophenol	mg/kg	0.5	<0.5						<0.5						<1.0	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0
	2,4,5-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<0.5	0				<1.0	<0.5	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0
	2,4,6-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<0.5	0				<1.0	<0.5	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0
	2,4-Dichlorophenol	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	2,4-Dimethylphenol	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	2,4-Dinitrophenol	mg/kg	5	<5.0						<5.0						<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	2,6-Dichlorophenol	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	2-Chlorophenol	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	2-Methylphenol	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.5	0				<0.2	<0.5	0				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2
	2-Nitrophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<0.5	0				<1.0	<0.5	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4	<0.4						<0.4						<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4
	4,6-Dinitro-2-methylphenol	mg/kg	5	<5.0						<5.0						<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	4-chloro-3-methylphenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<0.5	0				<1.0	<0.5	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0
	4-Nitrophenol	mg/kg	5	<5.0						<5.0						<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Pentachlorophenol	mg/kg	1	<1.0	<1.0	0				<2.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0
	Phenol	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	N-nitrosodi-n-butylamine	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	N-nitrosodi-n-propylamine	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1-naphthylamine	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5
	2-naphthylamine	mg/kg	0.5	<0.5						<0.5						<1.0	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0
	Diphenylamine	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	2-nitroaniline	mg/kg	1	<1.0	<1.0	0				<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0
	Aniline	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
Volatile	Benzene	mg/kg	0.1 (Primary): 0.2 (Interlab)	<0.1	<0.2	0				<0.1	<0.2	0				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1
	Toluene	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.1	<0.5	0				<0.1	<0.5	0				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1
	Ethylbenzene	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.1	<0.5	0				<0.1	<0.5	0				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1
	Xylene (m & p)	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.5	0				<0.2	<0.5	0				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2
	Xylene (o)	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.1	<0.5	0				<0.1	<0.5	0				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1
	Xylene Total	mg/kg	0.3 (Primary): 0.5 (Interlab)	<0.3	<0.5	0				<0.3	<0.5	0				<0.3	<0.3	0	<0.3	<0.3	0	<0.3	<0.3	0	<0.3
SVOC	Benzyl chloride	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Hexachlorobutadiene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Hexachlorocyclopentadiene	mg/kg	1 (Primary): 2.5 (Interlab)	<1.0	<2.5	0				<1.0	<2.5	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0
	Hexachloroethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
VOC	Chlorinated hydrocarbons EPAVic	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Other chlorinated hydrocarbons EPAVic	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,1,1,2-tetrachloroethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,1,1-trichloroethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,1,2,2-tetrachloroethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,1,2-trichloroethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5

			Lab Report Number	838535	ES2141124		838535	ES2141124		838536	ES2141124		838536	ES2141124		841164	841164		841164	841164		853609	853609		841164
			Field ID	AI_TP214_0.3	20211102_T01	RPD	AI_TP208_0.3	20211102_T02	RPD	AI_TP203_0.1	20211102_T03	RPD	AI_TP201_0.3	20211102_T04	RPD	AI_TP145_0.1	AI_20211108_D01	RPD	AI_TP112_0.1	AI_20211108_D02	RPD	AI_TP55-0.1	AI_20211109-D01	RPD	AI_TP145_0.1
			Sampled Date/Time	2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		8/11/2021	8/11/2021		8/11/2021	8/11/2021		9/11/2021	9/11/2021		8/11/2021
Method_Type	**ChemName**	**Units**	**EQL**																						
	1,1-dichloroethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,1-dichloroethene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,2,3-trichloropropane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,2-dichloroethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,2-dichloropropane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,3-dichloropropane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Bromochloromethane	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Bromodichloromethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Bromoform	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Carbon tetrachloride	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Chlorodibromomethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Chloroethane	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<5.0	0				<0.5	<5.0	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Chloroform	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Chloromethane	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<5.0	0				<0.5	<5.0	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	cis-1,2-dichloroethene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	cis-1,3-dichloropropene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Dibromomethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Dichloromethane	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Trichloroethene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Tetrachloroethene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	trans-1,2-dichloroethene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	trans-1,3-dichloropropene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Vinyl chloride	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<5.0	0				<0.5	<5.0	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
SVOC	2,4-Dinitrotoluene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<1.0	0				<0.5	<1.0	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	2,6-dinitrotoluene	mg/kg	1	<1.0	<1.0	0				<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0
	Nitrobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
OCP	Hexachlorobenzene	mg/kg	0.05 (Primary): 1 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
SVOC	1,2,3,4-tetrachlorobenzene	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,2,3,5-Tetrachlorobenzene	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,2,3-trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,2,4,5-tetrachlorobenzene	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,2,4-trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,2-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,3,5-Trichlorobenzene	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,3-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,4-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Hexachlorobenzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Pentachlorobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
VOC	1,2-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,3-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,4-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	4-chlorotoluene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Bromobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Chlorobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,2-dibromoethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Bromomethane	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<5.0	0				<0.5	<5.0	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Dichlorodifluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<5.0	0				<0.5	<5.0	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Iodomethane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Trichlorofluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<5.0	0				<0.5	<5.0	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
SVOC	Pronamide	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Trifluralin	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
Inorganic	Moisture Content (dried @ 103°C)	%	1	18.0			18.0			15.0			17.0			22.0	22.0	0	21.0	20.0	5	21.0	18.0	15	22.0
VOC	Total MAH	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,2,4-trimethylbenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	1,3,5-trimethylbenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Isopropylbenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Styrene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
Heavy Metal	Arsenic	mg/kg	2 (Primary): 5 (Interlab)	4.4	6.0	31				4.8	10.0	70				18.0	22.0	20	13.0	7.4	55	5.9	5.8	2	18.0
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)	<0.4	<1.0	0				<0.4	<1.0	0				<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4
	Chromium (III+VI)	mg/kg	5 (Primary): 2 (Interlab)	21.0	19.0	10				**13.0**	**28.0**	**73**				22.0	22.0	0	27.0	16.0	51	18.0	17.0	6	22.0
	Copper	mg/kg	5	22.0	20.0	10				5.4	9.0	50				25.0	23.0	8	20.0	17.0	16	21.0	20.0	5	25.0
	Lead	mg/kg	5	16.0	15.0	6				13.0	24.0	59				17.0	23.0	30	27.0	21.0	25	17.0	17.0	0	17.0
	Mercury	mg/kg	0.1	<0.1	<0.1	0				<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1
	Nickel	mg/kg	5 (Primary): 2 (Interlab)	13.0	7.0	60				<5.0	7.0	33				22.0	16.0	32	11.0	6.9	46	13.0	13.0	0	22.0
	Zinc	mg/kg	5	21.0	19.0	10				8.8	10.0	13				36.0	42.0	15	47.0	36.0	27	34.0	36.0	6	36.0
SVOC	2-Picoline	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	4-aminobiphenyl	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Pentachloronitrobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
OCP	Organochlorine pesticides EPAVic	mg/kg	0.1	<0.1						<0.1						<0.1	<0.1	0	<0.1	<0.1	0				<0.1
	Other organochlorine pesticides EPAVic	mg/kg	0.1	<0.1						<0.1						<0.1	<0.1	0	<0.1	<0.1	0				<0.1
	4,4-DDE	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	a-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Aldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Aldrin + Dieldrin	mg/kg	0.05	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	b-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	chlordane	mg/kg	0.1 (Primary): 0.05 (Interlab)	<0.1	<0.05	0				<0.1	<0.05	0				<0.1	<0.1	0	<0.1	<0.1	0				<0.1

			Lab Report Number	838535	ES2141124		838535	ES2141124		838536	ES2141124		838536	ES2141124		841164	841164		841164	841164		853609	853609		841164
			Field ID	AI_TP214_0.3	20211102_T01	RPD	AI_TP208_0.3	20211102_T02	RPD	AI_TP203_0.1	20211102_T03	RPD	AI_TP201_0.3	20211102_T04	RPD	AI_TP145_0.1	AI_20211108_D01	RPD	AI_TP112_0.1	AI_20211108_D02	RPD	AI_TP55-0.1	AI_20211109-D01	RPD	AI_TP145_0.1
			Sampled Date/Time	2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		8/11/2021	8/11/2021		8/11/2021	8/11/2021		9/11/2021	9/11/2021		8/11/2021
Method_Type	**ChemName**	**Units**	**EQL**																						
	d-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	DDD	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	DDT	mg/kg	0.05 (Primary): 1 (Interlab)	<0.05	<0.2	0				<0.05	<0.2	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	DDT+DDE+DDD	mg/kg	0.05	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Dieldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Endosulfan I	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Endosulfan II	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Endosulfan sulphate	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Endrin	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Endrin aldehyde	mg/kg	0.05	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	0.06	18	<0.05	<0.05	0				<0.05
	Endrin ketone	mg/kg	0.05	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	g-BHC (Lindane)	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Heptachlor	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Heptachlor epoxide	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Methoxychlor	mg/kg	0.05 (Primary): 0.2 (Interlab)	<0.05	<0.2	0				<0.05	<0.2	0				<0.05	<0.05	0	<0.05	<0.05	0				<0.05
	Toxaphene	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0				<0.5
SVOC	4,4-DDE	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	a-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Aldrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	b-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	d-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	DDD	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	DDT	mg/kg	1 (Primary): 0.2 (Interlab)	<1.0	<0.2	0				<1.0	<0.2	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0
	Dieldrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Endosulfan I	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Endosulfan II	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Endosulfan sulphate	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Endrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Endrin aldehyde	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Endrin ketone	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	g-BHC (Lindane)	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Heptachlor	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Heptachlor epoxide	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.05	0				<0.5	<0.05	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Methoxychlor	mg/kg	0.5 (Primary): 0.2 (Interlab)	<0.5	<0.2	0				<0.5	<0.2	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
OPP	Tokuthion	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Azinophos methyl	mg/kg	0.2 (Primary): 0.05 (Interlab)	<0.2	<0.05	0				<0.2	<0.05	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Bolstar (Sulprofos)	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Chlorfenvinphos	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.05	0				<0.2	<0.05	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Chlorpyrifos	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.05	0				<0.2	<0.05	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Chlorpyrifos-methyl	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.05	0				<0.2	<0.05	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Coumaphos	mg/kg	2	<2.0						<2.0						<2.0	<2.0	0	<2.0	<2.0	0				<2.0
	Demeton-O	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Demeton-S	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Diazinon	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.05	0				<0.2	<0.05	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Dichlorvos	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.05	0				<0.2	<0.05	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Dimethoate	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.05	0				<0.2	<0.05	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Disulfoton	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Ethion	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.05	0				<0.2	<0.05	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Ethoprop	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Fenitrothion	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Fensulfothion	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Fenthion	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.05	0				<0.2	<0.05	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	EPN	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Malathion	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.05	0				<0.2	<0.05	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Merphos	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Methyl parathion	mg/kg	0.2	<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Mevinphos (Phosdrin)	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Monocrotophos	mg/kg	2 (Primary): 0.2 (Interlab)	<2.0	<0.2	0				<2.0	<0.2	0				<2.0	<2.0	0	<2.0	<2.0	0				<2.0
	Naled (Dibrom)	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Omethoate	mg/kg	2	<2.0						<2.0						<2.0	<2.0	0	<2.0	<2.0	0				<2.0
	Phorate	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Pyrazophos	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Ronnel	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Terbufos	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Trichloronate	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Tetrachlorvinphos	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
SVOC	Acetophenone	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
Organic	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
PAH	Acenaphthene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Acenaphthylene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Anthracene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Benzo(a) pyrene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Chrysene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Fluoranthene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Fluorene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5

			Lab Report Number	838535	ES2141124		838535	ES2141124		838536	ES2141124		838536	ES2141124		841164	841164		841164	841164		853609	853609		841164
			Field ID	AI_TP214_0.3	20211102_T01	RPD	AI_TP208_0.3	20211102_T02	RPD	AI_TP203_0.1	20211102_T03	RPD	AI_TP201_0.3	20211102_T04	RPD	AI_TP145_0.1	AI_20211108_D01	RPD	AI_TP112_0.1	AI_20211108_D02	RPD	AI_TP55-0.1	AI_20211109-D01	RPD	AI_TP145_0.1
			Sampled Date/Time	2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		2/11/2021	2/11/2021		8/11/2021	8/11/2021		8/11/2021	8/11/2021		9/11/2021	9/11/2021		8/11/2021
Method_Type	**ChemName**	**Units**	**EQL**																						
	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Phenanthrene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Pyrene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	0.6	0.6	0				0.6	0.6	0				0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	1.2	1.2	0				1.2	1.2	0				1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	PAHs (Sum of total)	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
SVOC	1-Chloronaphthalene	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	2-chloronaphthalene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	2-methylnaphthalene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	3-methylcholanthrene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	7,12-dimethylbenz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<1.0	<0.5	0	<0.5	<0.5	0	<0.5	<1.0	0	<1.0
OPP	Parathion	mg/kg	0.2	<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2
	Pirimiphos-methyl	mg/kg	0.2	<0.2						<0.2						<0.2	<0.2	0	<0.2	<0.2	0				<0.2
SVOC	Bis(2-ethylhexyl) phthalate	mg/kg	5	<5.0	<5.0	0				<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0
	Butyl benzyl phthalate	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Diethylphthalate	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	**2.4**	**<0.5**	**131**	<0.5	<0.5	0	<0.5
	Dimethyl phthalate	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Di-n-butyl phthalate	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Di-n-octyl phthalate	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
VOC	Methyl Ethyl Ketone	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<5.0	0				<0.5	<5.0	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	4-Methyl-2-pentanone	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<5.0	0				<0.5	<5.0	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Acetone	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Allyl chloride	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
SVOC	3,3-Dichlorobenzidine	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	4-(dimethylamino) azobenzene	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	4-bromophenyl phenyl ether	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	4-chlorophenyl phenyl ether	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Bis(2-chloroethoxy) methane	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Bis(2-chloroisopropyl) ether	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	Dibenzofuran	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
	N-nitrosopiperidine	mg/kg	0.5	<0.5	<0.5	0				<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5
Organic	C6-C9	mg/kg	20 (Primary): 10 (Interlab)	<20.0	<10.0	0				<20.0	<10.0	0				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0
TPH	C10-C14	mg/kg	20 (Primary): 50 (Interlab)	<20.0	<50.0	0				<20.0	<50.0	0				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0
	C15-C28	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<100.0	0				<50.0	<100.0	0				<50.0	75.0	40	<50.0	57.0	13	<50.0	<50.0	0	<50.0
	C29-C36	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<100.0	0				<50.0	<100.0	0				58.0	75.0	26	52.0	75.0	36	<50.0	<50.0	0	58.0
	C10-C36	mg/kg	50	<50.0	<50.0	0				<50.0	<50.0	0				**58.0**	**150.0**	**88**	**52.0**	**132.0**	**87**	<50.0	<50.0	0	58.0
SVOC	Dibenz(a.j)acridine	mg/kg	0.5	<0.5						<0.5						<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 80 (1-10 x EQL); 50 (10-30 x EQL
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any metho

			Lab Report Number	ES2141598		841164	ES2141598		853609	ES2201408		842812	842812		842812	842812		842812	842812		842812	842812		842812	ES2142411	
			Field ID	20211108_T01	RPD	AI_TP112_0.1	20211108_T02	RPD	AI_TP55-0.1	20211109_T01	RPD	AI_TP82_0.3	AI_20211116-D01	RPD	AI_TP115_0.1	AI_20211115_D01	RPD	AI_TP116_0.1	AI_20211115_D02	RPD	AI_TP110_0.1	AI_20211115_D03	RPD	AI_TP115_0.1	20211115_T01	
			Sampled Date/Time	8/11/2021		8/11/2021	8/11/2021		9/11/2021	9/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021	
Method_Type	**ChemName**	**Units**	**EQL**																							
Organic	C6-C10	mg/kg	20 (Primary): 10 (Interlab)	<10.0	0	<20.0	<10.0	0	<20.0	<10.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0				<20.0	<10.0	
	C6-C10 (F1 minus BTEX)	mg/kg	20 (Primary): 10 (Interlab)	<10.0	0	<20.0	<10.0	0	<20.0	<10.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0				<20.0	<10.0	
	C10-C16	mg/kg	50	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0				<50.0	<50.0	
	C10-C16 (F2 minus Naphthalene)	mg/kg	50	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0				<50.0	<50.0	
	C16-C34	mg/kg	100	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0				<100.0	<100.0	
	C34-C40	mg/kg	100	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0				<100.0	<100.0	
	C10-C40 (Sum of total)	mg/kg	100 (Primary): 50 (Interlab)	<50.0	0	<100.0	<50.0	0	<100.0	<50.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0				<100.0	<50.0	
PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/kg	10 (Primary): 0.5 (Interlab)	<0.5	0	<10.0	<0.5	0	<10.0	<0.5	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.5	
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	
	Perfluorobutanoic acid (PFBA)	µg/kg	5 (Primary): 1 (Interlab)	<1.0	0	<5.0	<1.0	0	<5.0	<1.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<1.0	
	Perfluorodecanoic acid (PFDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluorododecanoic acid (PFDoDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluoroheptanoic acid (PFHpA)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluorohexanoic acid (PFHxA)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluorononanoic acid (PFNA)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluorooctanoic acid (PFOA)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluoropentanoic acid (PFPeA)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluorotetradecanoic acid (PFTeDA)	µg/kg	5 (Primary): 0.5 (Interlab)	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	
	Perfluorotridecanoic acid (PFTrDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluoroundecanoic acid (PFUnDA)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluorobutane sulfonic acid (PFBS)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluorodecanesulfonic acid (PFDS)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluoroheptane sulfonic acid (PFHpS)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluorohexane sulfonic acid (PFHxS)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluorononanesulfonic acid (PFNS)	µg/kg	5			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	Perfluorooctanesulfonic acid (PFOS)	µg/kg	5 (Primary): 0.2 (Interlab)	0.6	0	<5.0	0.4	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluoropentane sulfonic acid (PFPeS)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Perfluoropropanesulfonic acid (PFPrS)	µg/kg	5			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/kg	5 (Primary): 0.5 (Interlab)	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/kg	10 (Primary): 0.2 (Interlab)	<0.2	0	<10.0	<0.2	0	<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.2	
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/kg	5 (Primary): 0.5 (Interlab)	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	
	N-methyl perfluorooctane sulfonamide (NMeFOSA)	µg/kg	5 (Primary): 0.5 (Interlab)	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	
	N-methylperfluorooctane sulfonamidoacetic acid	µg/kg	10 (Primary): 0.2 (Interlab)	<0.2	0	<10.0	<0.2	0	<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.2	
	N-methylperfluorooctanesulfonamidoethanol	µg/kg	5 (Primary): 0.5 (Interlab)	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	
	Perfluorooctane sulfonamide (PFOSA)	µg/kg	5 (Primary): 0.2 (Interlab)	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Sum of PFAS	µg/kg	50 (Primary): 0.2 (Interlab)	0.6	0	<50.0	0.4	0	<50.0	<0.2	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<0.2	
	Sum of PFHxS and PFOS	µg/kg	5 (Primary): 0.2 (Interlab)	0.6	0	<5.0	0.4	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	
	Sum of PFAS (WA DER List)	µg/kg	10 (Primary): 0.2 (Interlab)	0.6	0	<10.0	0.4	0	<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.2	
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/kg	5			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	5			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
SVOC	2,3,4,6-Tetrachlorophenol	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	2,4,5-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<0.5	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<0.5	
	2,4,6-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<0.5	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<0.5	
	2,4-Dichlorophenol	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	2,4-Dimethylphenol	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	2,4-Dinitrophenol	mg/kg	5			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0		
	2,6-Dichlorophenol	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	2-Chlorophenol	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	2-Methylphenol	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.5	0	<0.2	<0.5	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0				<0.2	<0.5	
	2-Nitrophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<0.5	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<0.5	
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4			<0.4			<0.4			<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0				<0.4		
	4,6-Dinitro-2-methylphenol	mg/kg	5			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0		
	4-chloro-3-methylphenol	mg/kg	1 (Primary): 0.5 (Interlab)	<0.5	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<0.5	
	4-Nitrophenol	mg/kg	5			<5.0			<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0		
	Pentachlorophenol	mg/kg	1	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	
	Phenol	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	N-nitrosodi-n-butylamine	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	N-nitrosodi-n-propylamine	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1-naphthylamine	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<1.0	0				<0.5	<0.5	
	2-naphthylamine	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	Diphenylamine	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	2-nitroaniline	mg/kg	1	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	
	Aniline	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
Volatile	Benzene	mg/kg	0.1 (Primary): 0.2 (Interlab)	<0.2	0	<0.1	<0.2	0	<0.1	<0.2	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.2	
	Toluene	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.5	0	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.5	
	Ethylbenzene	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.5	0	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.5	
	Xylene (m & p)	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.5	0	<0.2	<0.5	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0				<0.2	<0.5	
	Xylene (o)	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.5	0	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.5	
	Xylene Total	mg/kg	0.3 (Primary): 0.5 (Interlab)	<0.5	0	<0.3	<0.5	0	<0.3	<0.5	0	<0.3	<0.3	0	<0.3	<0.3	0	<0.3	<0.3	0				<0.3	<0.5	
SVOC	Benzyl chloride	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	Hexachlorobutadiene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Hexachlorocyclopentadiene	mg/kg	1 (Primary): 2.5 (Interlab)	<2.5	0	<1.0	<2.5	0	<1.0	<2.5	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<2.5	
	Hexachloroethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
VOC	Chlorinated hydrocarbons EPAVic	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	Other chlorinated hydrocarbons EPAVic	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	1,1,1,2-tetrachloroethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,1,1-trichloroethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,1,2,2-tetrachloroethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,1,2-trichloroethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	

			Lab Report Number	ES2141598		841164	ES2141598		853609	ES2201408		842812	842812		842812	842812		842812	842812		842812	842812		842812	ES2142411	
			Field ID	20211108_T01	RPD	AI_TP112_0.1	20211108_T02	RPD	AI_TP55-0.1	20211109_T01	RPD	AI_TP82_0.3	AI_20211116-D01	RPD	AI_TP115_0.1	AI_20211115_D01	RPD	AI_TP116_0.1	AI_20211115_D02	RPD	AI_TP110_0.1	AI_20211115_D03	RPD	AI_TP115_0.1	20211115_T01	
			Sampled Date/Time	8/11/2021		8/11/2021	8/11/2021		9/11/2021	9/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021	
Method_Type	**ChemName**	**Units**	**EQL**																							
	1,1-dichloroethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,1-dichloroethene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,2,3-trichloropropane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,2-dichloroethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,2-dichloropropane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,3-dichloropropane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Bromochloromethane	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	Bromodichloromethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Bromoform	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Carbon tetrachloride	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Chlorodibromomethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Chloroethane	mg/kg	0.5 (Primary): 5 (Interlab)	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<5.0	
	Chloroform	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Chloromethane	mg/kg	0.5 (Primary): 5 (Interlab)	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<5.0	
	cis-1,2-dichloroethene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	cis-1,3-dichloropropene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Dibromomethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Dichloromethane	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	Trichloroethene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Tetrachloroethene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	trans-1,2-dichloroethene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	trans-1,3-dichloropropene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Vinyl chloride	mg/kg	0.5 (Primary): 5 (Interlab)	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<5.0	
SVOC	2,4-Dinitrotoluene	mg/kg	0.5 (Primary): 1 (Interlab)	<1.0	0	<0.5	<1.0	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	
	2,6-dinitrotoluene	mg/kg	1	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	
	Nitrobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
OCP	Hexachlorobenzene	mg/kg	0.05 (Primary): 1 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
SVOC	1,2,3,4-tetrachlorobenzene	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	1,2,3,5-Tetrachlorobenzene	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	1,2,3-trichlorobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,2,4,5-tetrachlorobenzene	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	1,2,4-trichlorobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,2-dichlorobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,3,5-Trichlorobenzene	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	1,3-dichlorobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,4-dichlorobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Hexachlorobenzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Pentachlorobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
VOC	1,2-dichlorobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,3-dichlorobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,4-dichlorobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	4-chlorotoluene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Bromobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Chlorobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,2-dibromoethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Bromomethane	mg/kg	0.5 (Primary): 5 (Interlab)	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<5.0	
	Dichlorodifluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<5.0	
	Iodomethane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Trichlorofluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<5.0	
SVOC	Pronamide	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Trifluralin	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
Inorganic	Moisture Content (dried @ 103°C)	%	1			21.0			21.0			16.0	15.0	6	19.0	21.0	10	19.0	20.0	5	24.0	22.0	9	19.0		
VOC	Total MAH	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	1,2,4-trimethylbenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	1,3,5-trimethylbenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Isopropylbenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Styrene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
Heavy Metal	Arsenic	mg/kg	2 (Primary): 5 (Interlab)	15.0	18	13.0	9.0	36	5.9	6.0	2	9.3	7.2	25	7.1	7.5	5	11.0	13.0	17				7.1	8.0	
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)	<1.0	0	<0.4	<1.0	0	<0.4	<1.0	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0				<0.4	<1.0	
	Chromium (III+VI)	mg/kg	5 (Primary): 2 (Interlab)	21.0	5	27.0	20.0	30	18.0	18.0	0	21.0	17.0	21	18.0	17.0	6	22.0	21.0	5				18.0	20.0	
	Copper	mg/kg	5	22.0	13	20.0	17.0	16	21.0	21.0	0	24.0	23.0	4	14.0	14.0	0	19.0	18.0	5				14.0	22.0	
	Lead	mg/kg	5	21.0	21	27.0	23.0	16	17.0	20.0	16	17.0	13.0	27	18.0	19.0	5	24.0	27.0	12				18.0	18.0	
	Mercury	mg/kg	0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.1	
	Nickel	mg/kg	5 (Primary): 2 (Interlab)	15.0	38	11.0	7.0	44	13.0	13.0	0	11.0	8.6	24	13.0	13.0	0	13.0	12.0	8				13.0	14.0	
	Zinc	mg/kg	5	32.0	12	47.0	26.0	58	34.0	39.0	14	31.0	27.0	14	18.0	27.0	40	29.0	32.0	10				18.0	78.0	
SVOC	2-Picoline	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	4-aminobiphenyl	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Pentachloronitrobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
OCP	Organochlorine pesticides EPAVic	mg/kg	0.1			<0.1						<0.1	<0.1	0				<0.1	<0.1	0						
	Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1						<0.1	<0.1	0				<0.1	<0.1	0						
	4,4-DDE	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	a-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Aldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Aldrin + Dieldrin	mg/kg	0.05	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	b-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	chlordane	mg/kg	0.1 (Primary): 0.05 (Interlab)	<0.05	0	<0.1	<0.05	0				<0.1	<0.1	0				<0.1	<0.1	0						

			Lab Report Number	ES2141598		841164	ES2141598		853609	ES2201408		842812	842812		842812	842812		842812	842812		842812	842812		842812	ES2142411	
			Field ID	20211108_T01	RPD	AI_TP112_0.1	20211108_T02	RPD	AI_TP55-0.1	20211109_T01	RPD	AI_TP82_0.3	AI_20211116-D01	RPD	AI_TP115_0.1	AI_20211115_D01	RPD	AI_TP116_0.1	AI_20211115_D02	RPD	AI_TP110_0.1	AI_20211115_D03	RPD	AI_TP115_0.1	20211115_T01	
			Sampled Date/Time	8/11/2021		8/11/2021	8/11/2021		9/11/2021	9/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021	
Method_Type	**ChemName**	**Units**	**EQL**																							
	d-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	DDD	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	DDT	mg/kg	0.05 (Primary): 1 (Interlab)	<0.2	0	<0.05	<0.2	0				<0.05	<0.05	0				<0.05	<0.05	0						
	DDT+DDE+DDD	mg/kg	0.05	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Dieldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Endosulfan I	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Endosulfan II	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Endosulfan sulphate	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Endrin	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Endrin aldehyde	mg/kg	0.05	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Endrin ketone	mg/kg	0.05	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	g-BHC (Lindane)	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Heptachlor	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Heptachlor epoxide	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	0	<0.05	<0.05	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Methoxychlor	mg/kg	0.05 (Primary): 0.2 (Interlab)	<0.2	0	<0.05	<0.2	0				<0.05	<0.05	0				<0.05	<0.05	0						
	Toxaphene	mg/kg	0.5			<0.5						<0.5	<0.5	0				<0.5	<0.5	0						
SVOC	4,4-DDE	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	a-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Aldrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	b-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	d-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	DDD	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	DDT	mg/kg	1 (Primary): 0.2 (Interlab)	<0.2	0	<1.0	<0.2	0	<1.0	<0.2	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<0.2	
	Dieldrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Endosulfan I	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Endosulfan II	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Endosulfan sulphate	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Endrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Endrin aldehyde	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Endrin ketone	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	g-BHC (Lindane)	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Heptachlor	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Heptachlor epoxide	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.05	
	Methoxychlor	mg/kg	0.5 (Primary): 0.2 (Interlab)	<0.2	0	<0.5	<0.2	0	<0.5	<0.2	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.2	
OPP	Tokuthion	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Azinophos methyl	mg/kg	0.2 (Primary): 0.05 (Interlab)	<0.05	0	<0.2	<0.05	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Bolstar (Sulprofos)	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Chlorfenvinphos	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.05	0	<0.2	<0.05	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Chlorpyrifos	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.05	0	<0.2	<0.05	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Chlorpyrifos-methyl	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.05	0	<0.2	<0.05	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Coumaphos	mg/kg	2			<2.0						<2.0	<2.0	0				<2.0	<2.0	0						
	Demeton-O	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Demeton-S	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Diazinon	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.05	0	<0.2	<0.05	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Dichlorvos	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.05	0	<0.2	<0.05	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Dimethoate	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.05	0	<0.2	<0.05	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Disulfoton	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Ethion	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.05	0	<0.2	<0.05	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Ethoprop	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Fenitrothion	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Fensulfothion	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Fenthion	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.05	0	<0.2	<0.05	0				<0.2	<0.2	0				<0.2	<0.2	0						
	EPN	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Malathion	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.05	0	<0.2	<0.05	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Merphos	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Methyl parathion	mg/kg	0.2	<0.2	0	<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Mevinphos (Phosdrin)	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Monocrotophos	mg/kg	2 (Primary): 0.2 (Interlab)	<0.2	0	<2.0	<0.2	0				<2.0	<2.0	0				<2.0	<2.0	0						
	Naled (Dibrom)	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Omethoate	mg/kg	2			<2.0						<2.0	<2.0	0				<2.0	<2.0	0						
	Phorate	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Pyrazophos	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Ronnel	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Terbufos	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Trichloronate	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
	Tetrachlorvinphos	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
SVOC	Acetophenone	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
Organic	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
PAH	Acenaphthene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Acenaphthylene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Anthracene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Benz(a)anthracene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Benzo(a) pyrene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Benzo(k)fluoranthene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Chrysene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Fluoranthene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Fluorene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	

			Lab Report Number	ES2141598		841164	ES2141598		853609	ES2201408		842812	842812		842812	842812		842812	842812		842812	842812		842812	ES2142411	
			Field ID	20211108_T01	RPD	AI_TP112_0.1	20211108_T02	RPD	AI_TP55-0.1	20211109_T01	RPD	AI_TP82_0.3	AI_20211116-D01	RPD	AI_TP115_0.1	AI_20211115_D01	RPD	AI_TP116_0.1	AI_20211115_D02	RPD	AI_TP110_0.1	AI_20211115_D03	RPD	AI_TP115_0.1	20211115_T01	
			Sampled Date/Time	8/11/2021		8/11/2021	8/11/2021		9/11/2021	9/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021	
Method_Type	**ChemName**	**Units**	**EQL**																							
	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Phenanthrene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Pyrene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0				0.6	0.6	
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0				1.2	1.2	
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	PAHs (Sum of total)	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
SVOC	1-Chloronaphthalene	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	2-chloronaphthalene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	2-methylnaphthalene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	3-methylcholanthrene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	7,12-dimethylbenz(a)anthracene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
OPP	Parathion	mg/kg	0.2	<0.2	0	<0.2	<0.2	0				<0.2	<0.2	0				<0.2	<0.2	0						
	Pirimiphos-methyl	mg/kg	0.2			<0.2						<0.2	<0.2	0				<0.2	<0.2	0						
SVOC	Bis(2-ethylhexyl) phthalate	mg/kg	5	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	
	Butyl benzyl phthalate	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Diethylphthalate	mg/kg	0.5	<0.5	0	**2.4**	**<0.5**	**131**	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Dimethyl phthalate	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Di-n-butyl phthalate	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Di-n-octyl phthalate	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
VOC	Methyl Ethyl Ketone	mg/kg	0.5 (Primary): 5 (Interlab)	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<5.0	
	4-Methyl-2-pentanone	mg/kg	0.5 (Primary): 5 (Interlab)	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<5.0	
	Acetone	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	Allyl chloride	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	Carbon disulfide	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
SVOC	3,3-Dichlorobenzidine	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	4-(dimethylamino) azobenzene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	4-bromophenyl phenyl ether	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	4-chlorophenyl phenyl ether	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Bis(2-chloroethoxy) methane	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	Bis(2-chloroisopropyl) ether	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		
	Dibenzofuran	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
	N-nitrosopiperidine	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	
Organic	C6-C9	mg/kg	20 (Primary): 10 (Interlab)	<10.0	0	<20.0	<10.0	0	<20.0	<10.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0				<20.0	<10.0	
TPH	C10-C14	mg/kg	20 (Primary): 50 (Interlab)	<50.0	0	<20.0	<50.0	0	<20.0	<50.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0				<20.0	<50.0	
	C15-C28	mg/kg	50 (Primary): 100 (Interlab)	<100.0	0	<50.0	<100.0	0	<50.0	<100.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0				<50.0	<100.0	
	C29-C36	mg/kg	50 (Primary): 100 (Interlab)	<100.0	0	52.0	<100.0	0	<50.0	<100.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0				<50.0	<100.0	
	C10-C36	mg/kg	50	<50.0	15	52.0	<50.0	4	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0				<50.0	<50.0	
SVOC	Dibenz(a.j)acridine	mg/kg	0.5			<0.5			<0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5		

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 80 (1-10 x EQL); 50 (10-30 x EQL
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methc

			Lab Report Number		842812	ES2142413		842812	842812		842812	842812	
			Field ID	**RPD**	AI_TP82_0.3	20211116_T01	**RPD**	AI_TP116_0.1	AI_20211115_T02	**RPD**	AI_TP110_0.1	AI_20211115_T03	**RPD**
			Sampled Date/Time		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021	
Method_Type	**ChemName**	**Units**	**EQL**										
Organic	C6-C10	mg/kg	20 (Primary): 10 (Interlab)	0	<20.0	<10.0	0	<20.0	<20.0	0			
	C6-C10 (F1 minus BTEX)	mg/kg	20 (Primary): 10 (Interlab)	0	<20.0	<10.0	0	<20.0	<20.0	0			
	C10-C16	mg/kg	50	0	<50.0	<50.0	0	<50.0	<50.0	0			
	C10-C16 (F2 minus Naphthalene)	mg/kg	50	0	<50.0	<50.0	0	<50.0	<50.0	0			
	C16-C34	mg/kg	100	0	<100.0	<100.0	0	<100.0	<100.0	0			
	C34-C40	mg/kg	100	0	<100.0	<100.0	0	<100.0	<100.0	0			
	C10-C40 (Sum of total)	mg/kg	100 (Primary): 50 (Interlab)	0	<100.0	<50.0	0	<100.0	<100.0	0			
PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/kg	10 (Primary): 0.5 (Interlab)	0	<10.0	<0.5	0	<10.0	<10.0	0	<10.0	<10.0	0
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorobutanoic acid (PFBA)	µg/kg	5 (Primary): 1 (Interlab)	0	<5.0	<1.0	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorodecanoic acid (PFDA)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorododecanoic acid (PFDoDA)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluoroheptanoic acid (PFHpA)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorohexanoic acid (PFHxA)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorononanoic acid (PFNA)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorooctanoic acid (PFOA)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluoropentanoic acid (PFPeA)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorotetradecanoic acid (PFTeDA)	µg/kg	5 (Primary): 0.5 (Interlab)	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorotridecanoic acid (PFTrDA)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluoroundecanoic acid (PFUnDA)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorobutane sulfonic acid (PFBS)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorodecanesulfonic acid (PFDS)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluoroheptane sulfonic acid (PFHpS)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorohexane sulfonic acid (PFHxS)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorononanesulfonic acid (PFNS)	µg/kg	5		<5.0			<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorooctanesulfonic acid (PFOS)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluoropentane sulfonic acid (PFPeS)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluoropropanesulfonic acid (PFPrS)	µg/kg	5		<5.0			<5.0	<5.0	0	<5.0	<5.0	0
	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/kg	5 (Primary): 0.5 (Interlab)	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/kg	10 (Primary): 0.2 (Interlab)	0	<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/kg	5 (Primary): 0.5 (Interlab)	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0
	N-methyl perfluorooctane sulfonamide (NMeFOSA)	µg/kg	5 (Primary): 0.5 (Interlab)	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0
	N-methylperfluorooctane sulfonamidoacetic acid	µg/kg	10 (Primary): 0.2 (Interlab)	0	<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0
	N-methylperfluorooctanesulfonamidoethanol	µg/kg	5 (Primary): 0.5 (Interlab)	0	<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0
	Perfluorooctane sulfonamide (PFOSA)	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Sum of PFAS	µg/kg	50 (Primary): 0.2 (Interlab)	0	<50.0	<0.2	0	<50.0	<50.0	0	<50.0	<50.0	0
	Sum of PFHxS and PFOS	µg/kg	5 (Primary): 0.2 (Interlab)	0	<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0
	Sum of PFAS (WA DER List)	µg/kg	10 (Primary): 0.2 (Interlab)	0	<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/kg	5		<5.0			<5.0	<5.0	0	<5.0	<5.0	0
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	5		<5.0			<5.0	<5.0	0	<5.0	<5.0	0
SVOC	2,3,4,6-Tetrachlorophenol	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	2,4,5-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)	0	<1.0	<0.5	0	<1.0	<1.0	0			
	2,4,6-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)	0	<1.0	<0.5	0	<1.0	<1.0	0			
	2,4-Dichlorophenol	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	2,4-Dimethylphenol	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	2,4-Dinitrophenol	mg/kg	5		<5.0			<5.0	<5.0	0			
	2,6-Dichlorophenol	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	2-Chlorophenol	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	2-Methylphenol	mg/kg	0.2 (Primary): 0.5 (Interlab)	0	<0.2	<0.5	0	<0.2	<0.2	0			
	2-Nitrophenol	mg/kg	1 (Primary): 0.5 (Interlab)	0	<1.0	<0.5	0	<1.0	<1.0	0			
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4		<0.4			<0.4	<0.4	0			
	4,6-Dinitro-2-methylphenol	mg/kg	5		<5.0			<5.0	<5.0	0			
	4-chloro-3-methylphenol	mg/kg	1 (Primary): 0.5 (Interlab)	0	<1.0	<0.5	0	<1.0	<1.0	0			
	4-Nitrophenol	mg/kg	5		<5.0			<5.0	<5.0	0			
	Pentachlorophenol	mg/kg	1	0	<1.0	<1.0	0	<1.0	<1.0	0			
	Phenol	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	N-nitrosodi-n-butylamine	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	N-nitrosodi-n-propylamine	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1-naphthylamine	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<1.0	0			
	2-naphthylamine	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	Diphenylamine	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	2-nitroaniline	mg/kg	1	0	<1.0	<1.0	0	<1.0	<1.0	0			
	Aniline	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
Volatile	Benzene	mg/kg	0.1 (Primary): 0.2 (Interlab)	0	<0.1	<0.2	0	<0.1	<0.1	0			
	Toluene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0	<0.1	<0.5	0	<0.1	<0.1	0			
	Ethylbenzene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0	<0.1	<0.5	0	<0.1	<0.1	0			
	Xylene (m & p)	mg/kg	0.2 (Primary): 0.5 (Interlab)	0	<0.2	<0.5	0	<0.2	<0.2	0			
	Xylene (o)	mg/kg	0.1 (Primary): 0.5 (Interlab)	0	<0.1	<0.5	0	<0.1	<0.1	0			
	Xylene Total	mg/kg	0.3 (Primary): 0.5 (Interlab)	0	<0.3	<0.5	0	<0.3	<0.3	0			
SVOC	Benzyl chloride	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	Hexachlorobutadiene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Hexachlorocyclopentadiene	mg/kg	1 (Primary): 2.5 (Interlab)	0	<1.0	<2.5	0	<1.0	<1.0	0			
	Hexachloroethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
VOC	Chlorinated hydrocarbons EPAVic	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	Other chlorinated hydrocarbons EPAVic	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	1,1,1,2-tetrachloroethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,1,1-trichloroethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,1,2,2-tetrachloroethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,1,2-trichloroethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			

			Lab Report Number		842812	ES2142413		842812	842812		842812	842812	
			Field ID	**RPD**	AI_TP82_0.3	20211116_T01	**RPD**	AI_TP116_0.1	AI_20211115_T02	**RPD**	AI_TP110_0.1	AI_20211115_T03	**RPD**
			Sampled Date/Time		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021	
Method_Type	**ChemName**	**Units**	**EQL**										
	1,1-dichloroethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,1-dichloroethene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,2,3-trichloropropane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,2-dichloroethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,2-dichloropropane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,3-dichloropropane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Bromochloromethane	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	Bromodichloromethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Bromoform	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Carbon tetrachloride	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Chlorodibromomethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Chloroethane	mg/kg	0.5 (Primary): 5 (Interlab)	0	<0.5	<5.0	0	<0.5	<0.5	0			
	Chloroform	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Chloromethane	mg/kg	0.5 (Primary): 5 (Interlab)	0	<0.5	<5.0	0	<0.5	<0.5	0			
	cis-1,2-dichloroethene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	cis-1,3-dichloropropene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Dibromomethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Dichloromethane	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	Trichloroethene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Tetrachloroethene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	trans-1,2-dichloroethene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	trans-1,3-dichloropropene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Vinyl chloride	mg/kg	0.5 (Primary): 5 (Interlab)	0	<0.5	<5.0	0	<0.5	<0.5	0			
SVOC	2,4-Dinitrotoluene	mg/kg	0.5 (Primary): 1 (Interlab)	0	<0.5	<1.0	0	<0.5	<0.5	0			
	2,6-dinitrotoluene	mg/kg	1	0	<1.0	<1.0	0	<1.0	<1.0	0			
	Nitrobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
OCP	Hexachlorobenzene	mg/kg	0.05 (Primary): 1 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0			
SVOC	1,2,3,4-tetrachlorobenzene	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	1,2,3,5-Tetrachlorobenzene	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	1,2,3-trichlorobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,2,4,5-tetrachlorobenzene	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	1,2,4-trichlorobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,2-dichlorobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,3,5-Trichlorobenzene	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	1,3-dichlorobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,4-dichlorobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Hexachlorobenzene	mg/kg	0.5 (Primary): 1 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0			
	Pentachlorobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
VOC	1,2-dichlorobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,3-dichlorobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,4-dichlorobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	4-chlorotoluene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Bromobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Chlorobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,2-dibromoethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Bromomethane	mg/kg	0.5 (Primary): 5 (Interlab)	0	<0.5	<5.0	0	<0.5	<0.5	0			
	Dichlorodifluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)	0	<0.5	<5.0	0	<0.5	<0.5	0			
	Iodomethane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Trichlorofluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)	0	<0.5	<5.0	0	<0.5	<0.5	0			
SVOC	Pronamide	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Trifluralin	mg/kg	0.5		<0.5			<0.5	<0.5	0			
Inorganic	Moisture Content (dried @ 103°C)	%	1		16.0			19.0	19.0	0	24.0	24.0	0
VOC	Total MAH	mg/kg	0.5		<0.5			<0.5	<0.5	0			
	1,2,4-trimethylbenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	1,3,5-trimethylbenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Isopropylbenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Styrene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
Heavy Metal	Arsenic	mg/kg	2 (Primary): 5 (Interlab)	12	9.3	6.0	43	11.0	11.0	0			
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)	0	<0.4	<1.0	0	<0.4	<0.4	0			
	Chromium (III+VI)	mg/kg	5 (Primary): 2 (Interlab)	11	21.0	17.0	21	22.0	21.0	5			
	Copper	mg/kg	5	44	24.0	22.0	9	19.0	16.0	17			
	Lead	mg/kg	5	0	17.0	14.0	19	24.0	22.0	9			
	Mercury	mg/kg	0.1	0	<0.1	<0.1	0	<0.1	<0.1	0			
	Nickel	mg/kg	5 (Primary): 2 (Interlab)	7	11.0	8.0	32	13.0	12.0	8			
	Zinc	mg/kg	5	125	31.0	22.0	34	29.0	32.0	10			
SVOC	2-Picoline	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	4-aminobiphenyl	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
	Pentachloronitrobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0			
OCP	Organochlorine pesticides EPAVic	mg/kg	0.1		<0.1			<0.1	<0.1	0			
	Other organochlorine pesticides EPAVic	mg/kg	0.1		<0.1			<0.1	<0.1	0			
	4,4-DDE	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0			
	a-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0			
	Aldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0			
	Aldrin + Dieldrin	mg/kg	0.05		<0.05	<0.05	0	<0.05	<0.05	0			
	b-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0			
	chlordane	mg/kg	0.1 (Primary): 0.05 (Interlab)		<0.1	<0.05	0	<0.1	<0.1	0			

			Lab Report Number		842812	ES2142413		842812	842812		842812	842812		
			Field ID	**RPD**	AI_TP82_0.3	20211116_T01	**RPD**	AI_TP116_0.1	AI_20211115_T02	**RPD**	AI_TP110_0.1	AI_20211115_T03	**RPD**	
			Sampled Date/Time		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021		
Method_Type	**ChemName**	**Units**	**EQL**											
	d-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0				
	DDD	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0				
	DDT	mg/kg	0.05 (Primary): 1 (Interlab)		<0.05	<0.2	0	<0.05	<0.05	0				
	DDT+DDE+DDD	mg/kg	0.05		<0.05	<0.05	0	<0.05	<0.05	0				
	Dieldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0				
	Endosulfan I	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0				
	Endosulfan II	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0				
	Endosulfan sulphate	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0				
	Endrin	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0				
	Endrin aldehyde	mg/kg	0.05		<0.05	<0.05	0	<0.05	<0.05	0				
	Endrin ketone	mg/kg	0.05		<0.05	<0.05	0	<0.05	<0.05	0				
	g-BHC (Lindane)	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0				
	Heptachlor	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0				
	Heptachlor epoxide	mg/kg	0.05 (Primary): 0.5 (Interlab)		<0.05	<0.05	0	<0.05	<0.05	0				
	Methoxychlor	mg/kg	0.05 (Primary): 0.2 (Interlab)		<0.05	<0.2	0	<0.05	<0.05	0				
	Toxaphene	mg/kg	0.5		<0.5			<0.5	<0.5	0				
SVOC	4,4-DDE	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	a-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	Aldrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	b-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	d-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	DDD	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	DDT	mg/kg	1 (Primary): 0.2 (Interlab)	0	<1.0	<0.2	0	<1.0	<0.05	0				
	Dieldrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	Endosulfan I	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	Endosulfan II	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	Endosulfan sulphate	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	Endrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	Endrin aldehyde	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	Endrin ketone	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	g-BHC (Lindane)	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	Heptachlor	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	Heptachlor epoxide	mg/kg	0.5 (Primary): 0.05 (Interlab)	0	<0.5	<0.05	0	<0.5	<0.05	0				
	Methoxychlor	mg/kg	0.5 (Primary): 0.2 (Interlab)	0	<0.5	<0.2	0	<0.5	<0.05	0				
OPP	Tokuthion	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Azinophos methyl	mg/kg	0.2 (Primary): 0.05 (Interlab)		<0.2	<0.05	0	<0.2	<0.2	0				
	Bolstar (Sulprofos)	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Chlorfenvinphos	mg/kg	0.2 (Primary): 0.5 (Interlab)		<0.2	<0.05	0	<0.2	<0.2	0				
	Chlorpyrifos	mg/kg	0.2 (Primary): 0.5 (Interlab)		<0.2	<0.05	0	<0.2	<0.2	0				
	Chlorpyrifos-methyl	mg/kg	0.2 (Primary): 0.5 (Interlab)		<0.2	<0.05	0	<0.2	<0.2	0				
	Coumaphos	mg/kg	2		<2.0			<2.0	<2.0	0				
	Demeton-O	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Demeton-S	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Diazinon	mg/kg	0.2 (Primary): 0.5 (Interlab)		<0.2	<0.05	0	<0.2	<0.2	0				
	Dichlorvos	mg/kg	0.2 (Primary): 0.5 (Interlab)		<0.2	<0.05	0	<0.2	<0.2	0				
	Dimethoate	mg/kg	0.2 (Primary): 0.5 (Interlab)		<0.2	<0.05	0	<0.2	<0.2	0				
	Disulfoton	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Ethion	mg/kg	0.2 (Primary): 0.5 (Interlab)		<0.2	<0.05	0	<0.2	<0.2	0				
	Ethoprop	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Fenitrothion	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Fensulfothion	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Fenthion	mg/kg	0.2 (Primary): 0.5 (Interlab)		<0.2	<0.05	0	<0.2	<0.2	0				
	EPN	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Malathion	mg/kg	0.2 (Primary): 0.5 (Interlab)		<0.2	<0.05	0	<0.2	<0.2	0				
	Merphos	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Methyl parathion	mg/kg	0.2		<0.2	<0.2	0	<0.2	<0.2	0				
	Mevinphos (Phosdrin)	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Monocrotophos	mg/kg	2 (Primary): 0.2 (Interlab)		<2.0	<0.2	0	<2.0	<2.0	0				
	Naled (Dibrom)	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Omethoate	mg/kg	2		<2.0			<2.0	<2.0	0				
	Phorate	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Pyrazophos	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Ronnel	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Terbufos	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Trichloronate	mg/kg	0.2		<0.2			<0.2	<0.2	0				
	Tetrachlorvinphos	mg/kg	0.2		<0.2			<0.2	<0.2	0				
SVOC	Acetophenone	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
Organic	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	0	<0.5	<0.5	0	<0.5	<0.5	0				
PAH	Acenaphthene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Acenaphthylene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Anthracene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Benz(a)anthracene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Benzo(a) pyrene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Benzo(b+j)fluoranthene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Benzo(g,h,i)perylene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Benzo(k)fluoranthene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Chrysene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Dibenz(a,h)anthracene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Fluoranthene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Fluorene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				

			Lab Report Number		842812	ES2142413		842812	842812		842812	842812			
			Field ID	**RPD**	AI_TP82_0.3	20211116_T01	**RPD**	AI_TP116_0.1	AI_20211115_T02	**RPD**	AI_TP110_0.1	AI_20211115_T03	**RPD**		
			Sampled Date/Time		15/11/2021	15/11/2021		15/11/2021	15/11/2021		15/11/2021	15/11/2021			
Method_Type	**ChemName**	**Units**	**EQL**												
	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	0	<0.5	<0.5	0	<0.5	<0.5	0					
	Phenanthrene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	Pyrene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	0	0.6	0.6	0	0.6	0.6	0					
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	0	1.2	1.2	0	1.2	1.2	0					
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	PAHs (Sum of total)	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
SVOC	1-Chloronaphthalene	mg/kg	0.5		<0.5			<0.5	<0.5	0					
	2-chloronaphthalene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	2-methylnaphthalene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	3-methylcholanthrene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	7,12-dimethylbenz(a)anthracene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
OPP	Parathion	mg/kg	0.2		<0.2	<0.2	0	<0.2	<0.2	0					
	Pirimiphos-methyl	mg/kg	0.2		<0.2			<0.2	<0.2	0					
SVOC	Bis(2-ethylhexyl) phthalate	mg/kg	5	0	<5.0	<5.0	0	<5.0	<5.0	0					
	Butyl benzyl phthalate	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	Diethylphthalate	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	Dimethyl phthalate	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	Di-n-butyl phthalate	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	Di-n-octyl phthalate	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
VOC	Methyl Ethyl Ketone	mg/kg	0.5 (Primary): 5 (Interlab)	0	<0.5	<5.0	0	<0.5	<0.5	0					
	4-Methyl-2-pentanone	mg/kg	0.5 (Primary): 5 (Interlab)	0	<0.5	<5.0	0	<0.5	<0.5	0					
	Acetone	mg/kg	0.5		<0.5			<0.5	<0.5	0					
	Allyl chloride	mg/kg	0.5		<0.5			<0.5	<0.5	0					
	Carbon disulfide	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
SVOC	3,3-Dichlorobenzidine	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	4-(dimethylamino) azobenzene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	4-bromophenyl phenyl ether	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	4-chlorophenyl phenyl ether	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	Bis(2-chloroethoxy) methane	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	Bis(2-chloroisopropyl) ether	mg/kg	0.5		<0.5			<0.5	<0.5	0					
	Dibenzofuran	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
	N-nitrosopiperidine	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0					
Organic	C6-C9	mg/kg	20 (Primary): 10 (Interlab)	0	<20.0	<10.0	0	<20.0	<20.0	0					
TPH	C10-C14	mg/kg	20 (Primary): 50 (Interlab)	0	<20.0	<50.0	0	<20.0	<20.0	0					
	C15-C28	mg/kg	50 (Primary): 100 (Interlab)	0	<50.0	<100.0	0	<50.0	<50.0	0					
	C29-C36	mg/kg	50 (Primary): 100 (Interlab)	0	<50.0	<100.0	0	<50.0	<50.0	0					
	C10-C36	mg/kg	50	0	<50.0	<50.0	0	<50.0	<50.0	0					
SVOC	Dibenz(a,j)acridine	mg/kg	0.5		<0.5			<0.5	<0.5	0					

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 80 (1-10 x EQL); 50 (10-30 x EQL
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any metho

			Lab Report Number	852528	852528		852528	852528		852528	ES2147421		852528	ES2147421		852729	852729		852729	852729		852729	852729		852729	852729		852729	852729		852729	852729		853214	853214		853214	ES2147422	
			Field ID	AI_TP225_0.4	AI_20212117_D01	RPD	AI_TP19_0.1	AI_20212117_D02	RPD	AI_TP225_0.4	20211217_T01	RPD	AI_TP19_0.1	20211217_T02	RPD	AI_TP27_0.1	AI_20211220_D01	RPD	AI_TP58_0.1	AI_20211220_D02	RPD	AI_TP108_0.5	AI_20211220_D03	RPD	AI_TP108_0.5	AI_20211220_T03	RPD	AI_TP58_0.1	AI_20211220_T02	RPD	AI_TP27_0.1	AI_20211220_T01	RPD	AI_TP86_0.4	AI_20211221_D01	RPD	AI_TP86_0.4	20211221_T01	RPD
			Sampled Date/Time	44547	44547		44547	44547		44547	44547		44547	44547		44550	44550		44550	44550		44550	44550		44550	44550		44550	44550		44550	44550		44551	44551		44551	44551	
Method_Type	**ChemName**	**Units**	**EQL**																																				
Organic	C6-C10	mg/kg	20 (Primary): 10 (Interlab)	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0	<20.0	<10.0	0	<20.0	<20.0	0				<20.0	<20.0	0	<20.0	<20.0	0				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0
	C6-C10 (F1 minus BTEX)	mg/kg	20 (Primary): 10 (Interlab)	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0	<20.0	<10.0	0	<20.0	<20.0	0				<20.0	<20.0	0	<20.0	<20.0	0				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0
	C10-C16	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0				<50.0	<50.0	0	<50.0	<50.0	0				<50.0	<50.0	0	**<50.0**	**1600.0**	**188**	<50.0	<50.0	0
	C10-C16 (F2 minus Naphthalene)	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0				<50.0	<50.0	0	<50.0	<50.0	0				<50.0	<50.0	0	**<50.0**	**1600.0**	**188**	<50.0	<50.0	0
	C16-C34	mg/kg	100	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	110.0	10				<100.0	<100.0	0	<100.0	<100.0	0				<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0
	C34-C40	mg/kg	100	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0				<100.0	<100.0	0	<100.0	<100.0	0				<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0
	C10-C40 (Sum of total)	mg/kg	100 (Primary): 50 (Interlab)	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<50.0	0	<100.0	<50.0	0	<100.0	110.0	10				<100.0	<100.0	0	<100.0	<100.0	0				<100.0	<100.0	0	**<100.0**	**1600.0**	**176**	<100.0	<50.0	0
PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)				<5.0	<5.0	0				<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)				<5.0	<5.0	0				<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/kg	10 (Primary): 0.5 (Interlab)				<10.0	<10.0	0				<10.0	<0.5	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.5	0
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/kg	5 (Primary): 0.5 (Interlab)				<5.0	<5.0	0				<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	Perfluorobutanoic acid (PFBA)	µg/kg	5 (Primary): 1 (Interlab)				<5.0	<5.0	0				<5.0	<1.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<1.0	0
	Perfluorodecanoic acid (PFDA)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorododecanoic acid (PFDoDA)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluoroheptanoic acid (PFHpA)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorohexanoic acid (PFHxA)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorononanoic acid (PFNA)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorooctanoic acid (PFOA)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	0.3	0
	Perfluoropentanoic acid (PFPeA)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorotetradecanoic acid (PFTeDA)	µg/kg	5 (Primary): 0.5 (Interlab)				<5.0	<5.0	0				<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	Perfluorotridecanoic acid (PFTrDA)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluoroundecanoic acid (PFUnDA)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorobutane sulfonic acid (PFBS)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorodecanesulfonic acid (PFDS)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluoroheptane sulfonic acid (PFHpS)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluorohexane sulfonic acid (PFHxS)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	0.5	0
	Perfluorononanesulfonic acid (PFNS)	µg/kg	5				<5.0	<5.0	0				<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	Perfluorooctanesulfonic acid (PFOS)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	5.2	4
	Perfluoropentane sulfonic acid (PFPeS)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Perfluoropropanesulfonic acid (PFPrS)	µg/kg	5				<5.0	<5.0	0				<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/kg	5 (Primary): 0.5 (Interlab)				<5.0	<5.0	0				<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/kg	10 (Primary): 0.2 (Interlab)				<10.0	<10.0	0				<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.2	0
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/kg	5 (Primary): 0.5 (Interlab)				<5.0	<5.0	0				<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	N-methyl perfluorooctane sulfonamide (NMeFOSA)	µg/kg	5 (Primary): 0.5 (Interlab)				<5.0	<5.0	0				<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	N-methylperfluorooctane sulfonamidoacetic acid	µg/kg	10 (Primary): 0.2 (Interlab)				<10.0	<10.0	0				<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<0.2	0
	N-methylperfluorooctanesulfonamidoethanol	µg/kg	5 (Primary): 0.5 (Interlab)				<5.0	<5.0	0				<5.0	<0.5	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0
	Perfluorooctane sulfonamide (PFOSA)	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0
	Sum of PFAS	µg/kg	50 (Primary): 0.2 (Interlab)				<50.0	<50.0	0				<50.0	<0.2	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	6.0	0
	Sum of PFHxS and PFOS	µg/kg	5 (Primary): 0.2 (Interlab)				<5.0	<5.0	0				<5.0	<0.2	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	5.7	13
	Sum of PFAS (WA DER List)	µg/kg	10 (Primary): 0.2 (Interlab)				<10.0	<10.0	0				<10.0	<0.2	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	6.0	0
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/kg	5				<5.0	<5.0	0				<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	5				<5.0	<5.0	0				<5.0			<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
SVOC	2,3,4,6-Tetrachlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	2,4,5-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0
	2,4,6-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0
	2,4-Dichlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	2,4-Dimethylphenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	2,4-Dinitrophenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	2,6-Dichlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	2-Chlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	2-Methylphenol	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.5	0	<0.2	<0.2	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.5	0
	2-Nitrophenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4	<0.4	<0.4	0	<0.4	<0.4	0	<0.4			<0.4			<0.4	<0.4	0				<0.4	<0.4	0	<0.4	<0.4	0				<0.4	<0.4	0	<0.4	<0.4	0	<0.4		
	4,6-Dinitro-2-methylphenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	4-chloro-3-methylphenol	mg/kg	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0
	4-Nitrophenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0		
	Pentachlorophenol	mg/kg	1	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
	Phenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	N-nitrosodi-n-butylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	N-nitrosodi-n-propylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1-naphthylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0
	2-naphthylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<1.0	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<1.0	<0.5	0	<0.5	<0.5	0	<0.5		
	Diphenylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	2-nitroaniline	mg/kg	1	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
	Aniline	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Volatile	Benzene	mg/kg	0.1 (Primary): 0.2 (Interlab)	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.2	0	<0.1	<0.2	0	<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.2	0
	Toluene	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.5	0
	Ethylbenzene	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.5	0
	Xylene (m & p)	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.5	0	<0.2	<0.2	0				<0.2	<0.2	0	<0.2	<0.2	0				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.5	0
	Xylene (o)	mg/kg	0.1 (Primary): 0.5 (Interlab)	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.5	0
	Xylene Total	mg/kg	0.3 (Primary): 0.5 (Interlab)	<0.3	<0.3	0	<0.3	<0.3	0	<0.3	<0.5	0	<0.3	<0.5	0	<0.3	<0.3	0				<0.3	<0.3	0	<0.3	<0.3	0				<0.3	<0.3	0	<0.3	<0.3	0	<0.3	<0.5	0
SVOC	Benzyl chloride	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	Hexachlorobutadiene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Hexachlorocyclopentadiene	mg/kg	1 (Primary): 2.5 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<2.5	0	<1.0	<2.5	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<2.5	0
	Hexachloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
VOC	Chlorinated hydrocarbons EPAVic	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	Other chlorinated hydrocarbons EPAVic	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	1,1,1,2-tetrachloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,1,1-trichloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,1,2,2-tetrachloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,1,2-trichloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,1-dichloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,1-dichloroethene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,2,3-trichloropropane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,2-dichloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,2-dichloropropane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,3-dichloropropane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Bromochloromethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	Bromodichloromethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Bromoform	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Carbon tetrachloride	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Chlorodibromomethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Chloroethane	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0
	Chloroform	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Chloromethane	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0
	cis-1,2-dichloroethene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	cis-1,3-dichloropropene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Dibromomethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Dichloromethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	Trichloroethene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Tetrachloroethene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	trans-1,2-dichloroethene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	trans-1,3-dichloropropene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Vinyl chloride	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0
SVOC	2,4-Dinitrotoluene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<1.0	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<1.0	0
	2,6-dinitrotoluene	mg/kg	1	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
	Nitrobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
OCP	Hexachlorobenzene	mg/kg	0.05 (Primary): 1 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0

			Lab Report Number	852528	852528		852528	852528		852528	ES2147421		852528	ES2147421		852729	852729		852729	852729		852729	852729		852729	852729		852729	852729		853214	853214		853214	ES2147422	
			Field ID	AI_TP225_0.4	AI_20212117_D01	RPD	AI_TP19_0.1	AI_20212117_D02	RPD	AI_TP225_0.4	20211217_T01	RPD	AI_TP19_0.1	20211217_T02	RPD	AI_TP27_0.1	AI_20211220_D01	RPD	AI_TP58_0.1	AI_20211220_D02	RPD	AI_TP108_0.5	AI_20211220_D03	RPD	AI_TP108_0.5	AI_20211220_T03	RPD	AI_TP58_0.1	AI_20211220_T02	RPD	AI_TP27_0.1	AI_20211220_T01	RPD	AI_TP86_0.4	AI_20211221_D01	RPD	AI_TP86_0.4	20211221_T01	RPD
			Sampled Date/Time	44547	44547		44547	44547		44547	44547		44547	44547		44550	44550		44550	44550		44550	44550		44550	44550		44550	44550		44550	44550		44551	44551		44551	44551	
Method_Type	ChemName	Units	EQL																																			
SVOC	1,2,3,4-tetrachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	1,2,3,5-Tetrachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	1,2,3-trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,2,4,5-tetrachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	1,2,4-trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,2-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,3,5-Trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	1,3-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,4-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Hexachlorobenzene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Pentachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
VOC	1,2-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,3-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,4-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	4-chlorotoluene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Bromobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Chlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,2-dibromoethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Bromomethane	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0
	Dichlorodifluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0
	Iodomethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Trichlorofluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0
SVOC	Pronamide	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Trifluralin	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
Inorganic	Moisture Content (dried @ 103°C)	%	1	18.0	19.0	5	13.0	15.0	14	18.0			13.0			22.0	22.0	0	19.0	16.0	17	13.0	13.0	0	13.0	17.0	27	19.0	10.0	62	22.0	24.0	9	24.0	25.0	4	24.0		
VOC	Total MAH	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	1,2,4-trimethylbenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	1,3,5-trimethylbenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Isopropylbenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Styrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Heavy Metal	Arsenic	mg/kg	2 (Primary): 5 (Interlab)	**<2.0**	**4.0**	**67**	**10.0**	**15.0**	**40**	**<2.0**	**6.0**	**100**	10.0	9.0	11	**7.9**	**15.0**	**62**				2.4	2.4	0	2.4	3.0	22				7.9	6.1	26	**11.0**	**5.3**	**70**	11.0	11.0	0
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<1.0	0	<0.4	<1.0	0	<0.4	<0.4	0				<0.4	<0.4	0	<0.4	<0.4	0				<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<1.0	0
	Chromium (III+VI)	mg/kg	5 (Primary): 2 (Interlab)	9.6	11.0	14	**22.0**	**33.0**	**40**	**9.6**	**16.0**	**50**	22.0	20.0	10	**19.0**	**30.0**	**45**				13.0	15.0	14	13.0	14.0	7				**19.0**	**13.0**	**38**	**34.0**	**17.0**	**67**	**34.0**	**24.0**	**34**
	Copper	mg/kg	5	13.0	13.0	0	9.8	9.0	9	**13.0**	**22.0**	**51**	9.8	8.0	20	13.0	17.0	27				21.0	27.0	25	21.0	28.0	29				13.0	11.0	17	26.0	21.0	21	26.0	22.0	17
	Lead	mg/kg	5	7.1	7.9	11	22.0	18.0	20	**7.1**	**13.0**	**59**	22.0	17.0	26	**18.0**	**38.0**	**71**				6.7	8.3	21	6.7	7.3	9				18.0	15.0	18	**23.0**	**16.0**	**36**	23.0	23.0	0
	Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
	Nickel	mg/kg	5 (Primary): 2 (Interlab)	<5.0	<5.0	0	8.5	6.9	21	<5.0	5.0	0	8.5	7.0	19	**7.9**	**13.0**	**49**				9.8	12.0	20	9.8	11.0	12				7.9	6.3	23	**15.0**	**10.0**	**40**	15.0	12.0	22
	Zinc	mg/kg	5	11.0	12.0	9	22.0	22.0	0	11.0	16.0	37	22.0	17.0	26	**27.0**	**50.0**	**60**				53.0	68.0	25	**53.0**	**75.0**	**34**				27.0	25.0	8	72.0	55.0	27	72.0	63.0	13
SVOC	2-Picoline	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	4-aminobiphenyl	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Pentachloronitrobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
OCP	Organochlorine pesticides EPAVic	mg/kg	0.1	<0.1	<0.1	0				<0.1												<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1		
	Other organochlorine pesticides EPAVic	mg/kg	0.1	<0.1	<0.1	0				<0.1												<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1		
	4,4-DDE	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	a-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Aldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Aldrin + Dieldrin	mg/kg	0.05	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	b-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	chlordane	mg/kg	0.1 (Primary): 0.05 (Interlab)	<0.1	<0.1	0				<0.1	<0.05	0										<0.1	<0.1	0	<0.1	<0.1	0							<0.1	<0.1	0	<0.1	<0.05	0
	d-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	DDD	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	DDT	mg/kg	0.05 (Primary): 1 (Interlab)	<0.05	<0.05	0				<0.05	<0.2	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.2	0
	DDT+DDE+DDD	mg/kg	0.05	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Dieldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Endosulfan I	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Endosulfan II	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Endosulfan sulphate	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Endrin	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Endrin aldehyde	mg/kg	0.05	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Endrin ketone	mg/kg	0.05	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	g-BHC (Lindane)	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Heptachlor	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Heptachlor epoxide	mg/kg	0.05 (Primary): 0.5 (Interlab)	<0.05	<0.05	0				<0.05	<0.05	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Methoxychlor	mg/kg	0.05 (Primary): 0.2 (Interlab)	<0.05	<0.05	0				<0.05	<0.2	0										<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.2	0
	Toxaphene	mg/kg	0.5	<0.5	<0.5	0				<0.5												<0.5	<0.5	0	<0.5	<0.5	0							<0.5	<0.5	0	<0.5		
SVOC	4,4-DDE	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	a-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Aldrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	b-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	d-BHC	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	DDD	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	DDT	mg/kg	1 (Primary): 0.2 (Interlab)	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.2	0	<1.0	<0.2	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.2	0
	Dieldrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Endosulfan I	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Endosulfan II	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Endosulfan sulphate	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Endrin	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Endrin aldehyde	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Endrin ketone	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	g-BHC (Lindane)	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Heptachlor	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Heptachlor epoxide	mg/kg	0.5 (Primary): 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0
	Methoxychlor	mg/kg	0.5 (Primary): 0.2 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.2	0	<0.5	<0.2	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.2	0

			Lab Report Number	852528	852528		852528	852528		852528	ES2147421		852528	ES2147421		852729	852729		852729	852729		852729	852729		852729	852729		852729	852729		853214	853214		853214	ES2147422	
			Field ID	AI_TP225_0.4	AI_20212117_D01	RPD	AI_TP19_0.1	AI_20212117_D02	RPD	AI_TP225_0.4	20211217_T01	RPD	AI_TP19_0.1	20211217_T02	RPD	AI_TP27_0.1	AI_20211220_D01	RPD	AI_TP58_0.1	AI_20211220_D02	RPD	AI_TP108_0.5	AI_20211220_D03	RPD	AI_TP108_0.5	AI_20211220_T03	RPD	AI_TP58_0.1	AI_20211220_T02	RPD	AI_TP27_0.1	AI_20211220_T01	RPD	AI_TP86_0.4	AI_20211221_D01	RPD	AI_TP86_0.4	20211221_T01	RPD
			Sampled Date/Time	44547	44547		44547	44547		44547	44547		44547	44547		44550	44550		44550	44550		44550	44550		44550	44550		44550	44550		44550	44550		44551	44551		44551	44551	
Method_Type	ChemName	Units	EQL																																										
OPP	Tokuthion	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Azinophos methyl	mg/kg	0.2 (Primary): 0.05 (Interlab)	<0.2	<0.2	0				<0.2	<0.05	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.05	0
	Bolstar (Sulprofos)	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Chlorfenvinphos	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0				<0.2	<0.05	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.05	0
	Chlorpyrifos	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0				<0.2	<0.05	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.05	0
	Chlorpyrifos-methyl	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0				<0.2	<0.05	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.05	0
	Coumaphos	mg/kg	2	<2.0	<2.0	0				<2.0												<2.0	<2.0	0	<2.0	<2.0	0							<2.0	<2.0	0	<2.0		
	Demeton-O	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Demeton-S	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Diazinon	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0				<0.2	<0.05	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.05	0
	Dichlorvos	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0				<0.2	<0.05	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.05	0
	Dimethoate	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0				<0.2	<0.05	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.05	0
	Disulfoton	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Ethion	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0				<0.2	<0.05	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.05	0
	Ethoprop	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Fenitrothion	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Fensulfothion	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Fenthion	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0				<0.2	<0.05	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.05	0
	EPN	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Malathion	mg/kg	0.2 (Primary): 0.5 (Interlab)	<0.2	<0.2	0				<0.2	<0.05	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.05	0
	Merphos	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Methyl parathion	mg/kg	0.2	<0.2	<0.2	0				<0.2	<0.2	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.2	0
	Mevinphos (Phosdrin)	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Monocrotophos	mg/kg	2 (Primary): 0.2 (Interlab)	<2.0	<2.0	0				<2.0	<0.2	0										<2.0	<2.0	0	<2.0	<2.0	0							<2.0	<2.0	0	<2.0	<0.2	0
	Naled (Dibrom)	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Omethoate	mg/kg	2	<2.0	<2.0	0				<2.0												<2.0	<2.0	0	<2.0	<2.0	0							<2.0	<2.0	0	<2.0		
	Phorate	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Pyrazophos	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Ronnel	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Terbufos	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Trichloronate	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
	Tetrachlorvinphos	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
SVOC	Acetophenone	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Organic	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
PAH	Acenaphthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Acenaphthylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a) pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Chrysene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Fluorene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Phenanthrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0				0.6	0.6	0	0.6	0.6	0				0.6	0.6	0	0.6	0.6	0	0.6	0.6	0
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0				1.2	1.2	0	1.2	1.2	0				1.2	1.2	0	1.2	1.2	0	1.2	1.2	0
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	PAHs (Sum of total)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
SVOC	1-Chloronaphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	2-chloronaphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	2-methylnaphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	3-methylcholanthrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	7,12-dimethylbenz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0
OPP	Parathion	mg/kg	0.2	<0.2	<0.2	0				<0.2	<0.2	0										<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2	<0.2	0
	Pirimiphos-methyl	mg/kg	0.2	<0.2	<0.2	0				<0.2												<0.2	<0.2	0	<0.2	<0.2	0							<0.2	<0.2	0	<0.2		
SVOC	Bis(2-ethylhexyl) phthalate	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0
	Butyl benzyl phthalate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Diethylphthalate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Dimethyl phthalate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Di-n-butyl phthalate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Di-n-octyl phthalate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
VOC	Methyl Ethyl Ketone	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0
	4-Methyl-2-pentanone	mg/kg	0.5 (Primary): 5 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0
	Acetone	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	Allyl chloride	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
SVOC	3,3-Dichlorobenzidine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	4-(dimethylamino) azobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	4-bromophenyl phenyl ether	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	4-chlorophenyl phenyl ether	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Bis(2-chloroethoxy) methane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Bis(2-chloroisopropyl) ether	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		
	Dibenzofuran	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	N-nitrosopiperidine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Organic	C6-C9	mg/kg	20 (Primary): 10 (Interlab)	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0	<20.0	<10.0	0	<20.0	<20.0	0				<20.0	<20.0	0	<20.0	<20.0	0				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0
TPH	C10-C14	mg/kg	50 (Primary): 50 (Interlab)	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<50.0	0	<20.0	<50.0	0	<20.0	25.0	22				<20.0	<20.0	0	<20.0	<20.0	0				<20.0	<20.0	0	**<20.0**	**1200.0**	**193**	<20.0	<50.0	0
	C15-C28	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<100.0	0	<50.0	<100.0	0	<50.0	59.0	17				<50.0	<50.0	0	<50.0	<50.0	0				<50.0	<50.0	0	**<50.0**	**470.0**	**162**	<50.0	<100.0	0
	C29-C36	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<100.0	0	<50.0	<100.0	0	<50.0	60.0	18				<50.0	<50.0	0	<50.0	<50.0	0				<50.0	58.0	15	<50.0	<50.0	0	<50.0	<100.0	0
	C10-C36	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	**<50.0**	**144.0**	**97**				<50.0	<50.0	0	<50.0	<50.0	0				<50.0	58.0	15	**<50.0**	**1670.0**	**188**	<50.0	<50.0	0
SVOC	Dibenz(a,j)acridine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0	<0.5		

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are; 80 (1-10 x EQL); 50 (10-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

			Lab Report Number	861777	852729	838536	841164	835522	836571	861777	853609	898926	900392	900799
			Field ID	20220209_R01	AI_TRIP BLANK	AI_TB	AI_TB	AI_TB	AI_TRIP BLANK	TB	AI_TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
			Sampled_Date/Time	9/02/2022	20/12/2021	2/11/2021	8/11/2021	25/10/2021	27/10/2021	9/02/2022	9/11/2021	16/06/2022	21/06/2022	24/06/2022
			Sample Type	Rinsate	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B
Chem_Group	**ChemName**	**Units**	**EQL**											
Heavy Metal	Arsenic	mg/l	0.001	**0.003**										
	Arsenic (Filtered)	mg/l	0.001											
	Cadmium	mg/l	0.0002	<0.0002										
	Cadmium (Filtered)	mg/l	0.0002											
	Chromium (III+VI)	mg/l	0.001	<0.001										
	Chromium (III+VI) (Filtered)	mg/l	0.001											
	Copper	mg/l	0.001	<0.001										
	Copper (Filtered)	mg/l	0.001											
	Lead	mg/l	0.001	<0.001										
	Lead (Filtered)	mg/l	0.001											
	Mercury	mg/l	0.0001	<0.0001										
	Mercury (Filtered)	mg/l	0.0001											
	Nickel	mg/l	0.001	<0.001										
	Nickel (Filtered)	mg/l	0.001											
	Zinc	mg/l	0.005	<0.005										
	Zinc (Filtered)	mg/l	0.005											
OCP	Organochlorine pesticides EPAVic	µg/l	2	<2										
	Other organochlorine pesticides EPAVic	µg/l	2	<2										
	4,4-DDE	µg/l	0.2	<0.2										
	a-BHC	µg/l	0.2	<0.2										
	Aldrin	µg/l	0.2	<0.2										
	Aldrin + Dieldrin	µg/l	0.2	<0.2										
	b-BHC	µg/l	0.2	<0.2										
	chlordane	µg/l	2	<2										
	d-BHC	µg/l	0.2	<0.2										
	DDD	µg/l	0.2	<0.2										
	DDT	µg/l	0.2	<0.2										
	DDT+DDE+DDD	µg/l	0.2	<0.2										
	Dieldrin	µg/l	0.2	<0.2										
	Endosulfan I	µg/l	0.2	<0.2										
	Endosulfan II	µg/l	0.2	<0.2										
	Endosulfan sulphate	µg/l	0.2	<0.2										
	Endrin	µg/l	0.2	<0.2										
	Endrin aldehyde	µg/l	0.2	<0.2										
	Endrin ketone	µg/l	0.2	<0.2										
	g-BHC (Lindane)	µg/l	0.2	<0.2										
	Heptachlor	µg/l	0.2	<0.2										
	Heptachlor epoxide	µg/l	0.2	<0.2										
	Hexachlorobenzene	µg/l	0.2	<0.2										
	Methoxychlor	µg/l	0.2	<0.2										
	Toxaphene	mg/l	0.005	<0.005										
OPP	Tokuthion	mg/l	0.002	<0.002										
	Azinophos methyl	µg/l	2	<2										
	Bolstar (Sulprofos)	µg/l	2	<2										
	Chlorfenvinphos	µg/l	20	<20										
	Chlorpyrifos	µg/l	2	<2										
	Chlorpyrifos-methyl	mg/l	0.002	<0.002										
	Coumaphos	µg/l	20	<20										
	Demeton-O	µg/l	2	<2										
	Demeton-S	µg/l	2	<2										
	Diazinon	µg/l	2	<2										
	Dichlorvos	µg/l	2	<2										
	Dimethoate	µg/l	2	<2										
	Disulfoton	µg/l	2	<2										
	Ethion	µg/l	2	<2										
	Ethoprop	µg/l	2	<2										
	Fenitrothion	µg/l	2	<2										
	Fensulfothion	µg/l	2	<2										
	Fenthion	µg/l	2	<2										
	EPN	µg/l	2	<2										
	Malathion	µg/l	2	<2										
	Merphos	mg/l	0.002	<0.002										
	Methyl parathion	µg/l	2	<2										
	Mevinphos (Phosdrin)	µg/l	2	<2										
	Monocrotophos	µg/l	2	<2										
	Naled (Dibrom)	µg/l	2	<2										
	Omethoate	µg/l	20	<20										
	Parathion	µg/l	2	<2										
	Phorate	µg/l	2	<2										
	Pirimiphos-methyl	mg/l	0.02	<0.02										
	Pyrazophos	µg/l	2	<2										
	Ronnel	µg/l	2	<2										
	Terbufos	µg/l	2	<2										
	Trichloronate	µg/l	2	<2										
	Tetrachlorvinphos	mg/l	0.002	<0.002										
Organic	>C10 - C40 Fraction (sum) (SG)	mg/l	0.1											
	Tokuthion	mg/l	0.002											
	TPH C10-C14 Fraction after Silica Cleanup	mg/l	0.05											
	TPH C15-C28 Fraction after Silica Cleanup	mg/l	0.1											
	TPH C29-C36 Fraction after Silica Cleanup	mg/l	0.1											
	TRH >C10-C16 (after silica gel clean-up)	mg/l	0.05											
	TRH >C16-C34 (after silica gel clean-up)	mg/l	0.1											
	TRH >C34-C40 (after silica gel clean-up)	mg/l	0.1											
	1,1,1,2-tetrachloroethane	µg/l	1											
	C6-C9	µg/l	20	<20								<20		<20
	C10-C14	µg/l	50											
	C15-C28	µg/l	100											
	C29-C36	µg/l	100											
	C6-C10	µg/l	20	<20								<20		<20
	C6-C10 (F1 minus BTEX)	µg/l	20	<20								<20		<20
	C10-C16	µg/l	50	<50										
	C10-C16 (F2 minus Naphthalene)	µg/l	50	<50										
	C16-C34	µg/l	100	<100										
	1,1,1-trichloroethane	µg/l	1											
	C34-C40	µg/l	100	<100										
	C10-C40 (Sum of total)	µg/l	100	<100										
	Naphthalene	µg/l	1	<10								<10		<10
PAH	Acenaphthene	µg/l	1	<1										
	Acenaphthylene	µg/l	1	<1										
	Anthracene	µg/l	1	<1										
	Benz(a)anthracene	µg/l	1	<1										
	Benzo(a) pyrene	µg/l	1	<1										
	Benzo(b+j)fluoranthene	mg/l	0.001	<0.001										
	Benzo(g,h,i)perylene	µg/l	1	<1										
	Benzo(k)fluoranthene	µg/l	1	<1										
	Chrysene	µg/l	1	<1										
	Dibenz(a,h)anthracene	µg/l	1	<1										
	Fluoranthene	µg/l	1	<1										
	Fluorene	µg/l	1	<1										
	Indeno(1,2,3-c,d)pyrene	µg/l	1	<1										
	Naphthalene	µg/l	1	<1										
	Phenanthrene	µg/l	1	<1										
	Pyrene	µg/l	1	<1										
	PAHs (Sum of total)	µg/l	1	<1										

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			Field ID	20220209_R01	AI_TRIP BLANK	AI_TB	AI_TB	AI_TB	AI_TRIP BLANK	TB	AI_TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
			Sampled_Date/Time	9/02/2022	20/12/2021	2/11/2021	8/11/2021	25/10/2021	27/10/2021	9/02/2022	9/11/2021	16/06/2022	21/06/2022	24/06/2022
			Sample Type	Rinsate	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B
Chem_Group	**ChemName**	**Units**	**EQL**											
PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.01	<0.01										
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01	<0.01										
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.05	<0.05										
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.01	<0.01										
	Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.05										
	Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.01										
	Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.01										
	Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.01										
	Perfluorohexanoic acid (PFHxA)	µg/L	0.01	<0.01										
	Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.01										
	Perfluorooctanoic acid (PFOA)	µg/L	0.01	<0.01										
	Perfluoropentanoic acid (PFPeA)	µg/L	0.01	<0.01										
	Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.01										
	Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.01										
	Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.01										
	Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	<0.01										
	Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01	<0.01										
	Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.01										
	Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	<0.01										
	Perfluorononanesulfonic acid (PFNS)	µg/L	0.01	<0.01										
	Perfluorooctanesulfonic acid (PFOS)	µg/L	0.01	<0.01										
	Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	<0.01										
	Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.01										
	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/L	0.05	<0.05										
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/L	0.05	<0.05										
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/L	0.05	<0.05										
	N-methyl perfluorooctane sulfonamide (NMeFOSA)	µg/L	0.05	<0.05										
	N-methylperfluorooctane sulfonamidoacetic acid	µg/L	0.05	<0.05										
	N-methylperfluorooctanesulfonamidoethanol	µg/L	0.05	<0.05										
	Perfluorooctane sulfonamide (PFOSA)	µg/L	0.05	<0.05										
	Sum of PFAS	µg/L	0.1	<0.1										
	Sum of PFHxS and PFOS	µg/L	0.01	<0.01										
	Sum of PFAS (WA DER List)	µg/L	0.05	<0.05										
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.01	<0.01										
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	<0.01										
SVOC	1,2,3,4-tetrachlorobenzene	mg/l	0.005	<0.005										
	1,2,3,5-Tetrachlorobenzene	mg/l	0.005	<0.005										
	1,2,3-trichlorobenzene	µg/l	5	<5										
	1,2,4,5-tetrachlorobenzene	µg/l	5	<5										
	1,2,4-trichlorobenzene	µg/l	5	<5										
	1,2-dichlorobenzene	µg/l	5	<5										
	1,3,5-Trichlorobenzene	µg/l	5	<5										
	1,3-dichlorobenzene	µg/l	5	<5										
	1,4-dichlorobenzene	µg/l	5	<5										
	1-naphthylamine	µg/l	5	<10										
	Dibenz(a,j)acridine	mg/l	0.005	<0.005										
	1-Chloronaphthalene	µg/l	5	<5										
	2,4-Dinitrotoluene	µg/l	5	<5										
	2-chloronaphthalene	µg/l	5	<5										
	2-methylnaphthalene	µg/l	5	<5										
	2,6-dinitrotoluene	µg/l	5	<5										
	3-methylcholanthrene	µg/l	5	<5										
	7,12-dimethylbenz(a)anthracene	µg/l	5	<5										
	2-naphthylamine	µg/l	5	<10										
	2-nitroaniline	µg/l	5	<5										
	2-Picoline	µg/l	5	<5										
	3,3-Dichlorobenzidine	µg/l	5	<5										
	4-(dimethylamino) azobenzene	µg/l	5	<5										
	4,4-DDE	µg/l	5	<5										
	4-aminobiphenyl	µg/l	5	<5										
	4-bromophenyl phenyl ether	µg/l	5	<5										
	4-chlorophenyl phenyl ether	µg/l	5	<5										
	a-BHC	µg/l	5	<5										
	Acetophenone	µg/l	5	<5										
	Aldrin	µg/l	5	<5										
	Aniline	µg/l	5	<5										
	b-BHC	µg/l	5	<5										
	Benzyl chloride	mg/l	0.005	<0.005										
	Bis(2-chloroethoxy) methane	µg/l	5	<5										
	Bis(2-chloroisopropyl) ether	µg/l	5	<5										
	Bis(2-ethylhexyl) phthalate	µg/l	5	<5										
	Butyl benzyl phthalate	µg/l	5	<5										
	2,3,4,6-Tetrachlorophenol	µg/l	10	<10										
	2,4,5-Trichlorophenol	µg/l	10	<10										
	2,4,6-Trichlorophenol	µg/l	10	<10										
	2,4-Dichlorophenol	µg/l	3	<3										
	2,4-Dimethylphenol	µg/l	3	<3										
	2,4-Dinitrophenol	mg/l	0.03	<0.03										
	2,6-Dichlorophenol	µg/l	3	<3										
	2-Chlorophenol	µg/l	3	<3										
	2-Methylphenol	µg/l	3	<3										
	2-Nitrophenol	µg/l	10	<10										
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.006	<0.006										
	d-BHC	µg/l	5	<5										
	DDD	µg/l	5	<5										
	DDT	µg/l	5	<5										
	4,6-Dinitro-2-methylphenol	µg/l	30	<30										
	4-chloro-3-methylphenol	µg/l	10	<10										
	Dibenzofuran	µg/l	5	<5										
	4-Nitrophenol	µg/l	30	<30										
	Pentachlorophenol	µg/l	10	<10										
	Dieldrin	µg/l	5	<5										
	Diethylphthalate	µg/l	5	<5										
	Dimethyl phthalate	µg/l	5	<5										
	Phenol	µg/l	3	<3										
	Di-n-butyl phthalate	µg/l	5	<5										
	Di-n-octyl phthalate	µg/l	5	<5										
	Diphenylamine	µg/l	5	<5										
	Endosulfan I	µg/l	5	<5										
	Endosulfan II	µg/l	5	<5										
	Endosulfan sulphate	µg/l	5	<5										
	Endrin	µg/l	5	<5										
	Endrin aldehyde	µg/l	5	<5										
	Endrin ketone	µg/l	5	<5										
	g-BHC (Lindane)	µg/l	5	<5										
	Heptachlor	µg/l	5	<5										
	Heptachlor epoxide	µg/l	5	<5										
	Hexachlorobenzene	µg/l	5	<5										
	Hexachlorobutadiene	µg/l	5	<5										
	Hexachlorocyclopentadiene	µg/l	5	<5										
	Hexachloroethane	µg/l	5	<5										
	Methoxychlor	µg/l	5	<5										
	Nitrobenzene	µg/l	5	<5										
	N-nitrosodi-n-butylamine	µg/l	5	<5										
	N-nitrosodi-n-propylamine	µg/l	5	<5										
	N-nitrosopiperidine	µg/l	5	<5										
	Pentachlorobenzene	µg/l	5	<5										
	Pentachloronitrobenzene	µg/l	5	<5										
	Pronamide	µg/l	5	<5										
	Trifluralin	mg/l	0.005	<0.005										

			Lab Report Number	861777	852729	838536	841164	835522	836571	861777	853609	898926	900392	900799
			Field ID	20220209_R01	AI_TRIP BLANK	AI_TB	AI_TB	AI_TB	AI_TRIP BLANK	TB	AI_TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
			Sampled_Date/Time	9/02/2022	20/12/2021	2/11/2021	8/11/2021	25/10/2021	27/10/2021	9/02/2022	9/11/2021	16/06/2022	21/06/2022	24/06/2022
			Sample Type	Rinsate	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B
Chem_Group	**ChemName**	**Units**	**EQL**											
TPH	TPH C10-C14 Fraction after Silica Cleanup	mg/l	0.05											
	TPH C15-C28 Fraction after Silica Cleanup	mg/l	0.1											
	TPH C29-C36 Fraction after Silica Cleanup	mg/l	0.1											
	TRH C10-C36 (Total) (after silica gel clean-up)	mg/l	0.1											
	C10-C14	µg/l	50	<50										
	C15-C28	µg/l	100	<100										
	C29-C36	µg/l	100	<100										
	C10-C36	µg/l	100	<100										
VOC	Chlorinated hydrocarbons EPAVic	µg/l	5	<5										
	Other chlorinated hydrocarbons EPAVic	µg/l	5	<5										
	1,1,1,2-tetrachloroethane	µg/l	1	<1										
	1,1,1-trichloroethane	µg/l	1	<1										
	1,1,2,2-tetrachloroethane	µg/l	1	<1										
	1,1,2-trichloroethane	µg/l	1	<1										
	Total MAH	mg/l	0.003	<0.003										
	1,1-dichloroethane	µg/l	1	<1										
	1,1-dichloroethene	µg/l	1	<1										
	1,2,3-trichloropropane	µg/l	1	<1										
	1,2,4-trimethylbenzene	µg/l	1	<1										
	1,2-dibromoethane	µg/l	1	<1										
	1,2-dichlorobenzene	µg/l	1	<1										
	1,2-dichloroethane	µg/l	1	<1										
	1,2-dichloropropane	µg/l	1	<1										
	1,3,5-trimethylbenzene	µg/l	1	<1										
	1,3-dichlorobenzene	µg/l	1	<1										
	1,3-dichloropropane	µg/l	1	<1										
	1,4-dichlorobenzene	µg/l	1	<1										
	Methyl Ethyl Ketone	µg/l	5	<5										
	4-chlorotoluene	µg/l	1	<1										
	4-Methyl-2-pentanone	µg/l	5	<5										
	Acetone	mg/l	0.005	<0.005										
	Allyl chloride	mg/l	0.001	<0.001										
	Bromobenzene	µg/l	1	<1										
	Bromochloromethane	µg/l	1	<1										
	Bromodichloromethane	µg/l	1	<1										
	Bromoform	µg/l	1	<1										
	Bromomethane	µg/l	5	<5										
	Carbon disulfide	µg/l	1	<1										
	Carbon tetrachloride	µg/l	1	<1										
	Chlorobenzene	µg/l	1	<1										
	Chlorodibromomethane	µg/l	1	<1										
	Chloroethane	µg/l	5	<5										
	Chloroform	µg/l	5	<5										
	Chloromethane	µg/l	5	<5										
	cis-1,2-dichloroethene	µg/l	1	<1										
	cis-1,3-dichloropropene	µg/l	1	<1										
	Dibromomethane	µg/l	1	<1										
	Dichlorodifluoromethane	µg/l	5	<5										
	Dichloromethane	µg/l	5	<5										
	Iodomethane	µg/l	1	<1										
	Isopropylbenzene	µg/l	1	<1										
	Styrene	µg/l	1	<1										
	Trichloroethene	µg/l	1	<1										
	Tetrachloroethene	µg/l	1	<1										
	trans-1,2-dichloroethene	µg/l	1	<1										
	trans-1,3-dichloropropene	µg/l	1	<1										
	Trichlorofluoromethane	µg/l	5	<5										
	Vinyl chloride	µg/l	5	<5										
Volatile	1,2,4-trimethylbenzene	µg/l	1											
	1,3,5-trimethylbenzene	µg/l	1											
	Benzene	µg/l	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Toluene	µg/l	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Ethylbenzene	µg/l	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Xylene (m & p)	µg/l	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Xylene (o)	µg/l	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Xylene Total	µg/l	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

Trip Spike Recoveries (30% - 150% is acceptable)

SDG	Lab_Report_Number	Matrix_Type	Field_ID	Method_Name	Compound	Spike_Recovery_%	Acceptable	Result_Type	Lab_Comments
5-Nov-21	838536	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	Benzene	110	Y	REG	
05 Nov 2021	838536	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	110	Y	REG	
05 Nov 2021	838536	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	110	Y	REG	
05 Nov 2021	838536	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	o-Xylene	100	Y	REG	
05 Nov 2021	838536	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	Toluene	110	Y	REG	
05 Nov 2021	838536	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	110	Y	REG	
09 Feb 2022	861777	WATER	TS	LTM-ORG-2010 TRH C6-C40	Benzene	110	Y	REG	
09 Feb 2022	861777	WATER	TS	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	110	Y	REG	
09 Feb 2022	861777	WATER	TS	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	110	Y	REG	
09 Feb 2022	861777	WATER	TS	LTM-ORG-2010 TRH C6-C40	o-Xylene	110	Y	REG	
09 Feb 2022	861777	WATER	TS	LTM-ORG-2010 TRH C6-C40	Toluene	110	Y	REG	
09 Feb 2022	861777	WATER	TS	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	110	Y	REG	
11 Nov 2021	853609	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Benzene	62	Y	REG	
11 Nov 2021	853609	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	30	Y	REG	
11 Nov 2021	853609	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	54	Y	REG	
11 Nov 2021	853609	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	o-Xylene	19	N	REG	
11 Nov 2021	853609	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Toluene	36	Y	REG	
11 Nov 2021	853609	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	31	Y	REG	
17 Jun 2022	898926	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Benzene	88	Y	REG	
17 Jun 2022	898926	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	92	Y	REG	
17 Jun 2022	898926	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	95	Y	REG	
17 Jun 2022	898926	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Naphthalene	110	Y	REG	
17 Jun 2022	898926	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	o-Xylene	87	Y	REG	
17 Jun 2022	898926	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Toluene	85	Y	REG	
17 Jun 2022	898926	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	TRH C6-C10	71	Y	REG	
17 Jun 2022	898926	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	TRH C6-C9	72	Y	REG	
17 Jun 2022	898926	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	90	Y	REG	
21 Dec 2021	852729	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Benzene	100	Y	REG	
21 Dec 2021	852729	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	90	Y	REG	
21 Dec 2021	852729	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	110	Y	REG	
21 Dec 2021	852729	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	o-Xylene	85	Y	REG	
21 Dec 2021	852729	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Toluene	89	Y	REG	
21 Dec 2021	852729	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	93	Y	REG	
22 Jun 2022	900392	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Benzene	96	Y	REG	
22 Jun 2022	900392	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	86	Y	REG	
22 Jun 2022	900392	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	91	Y	REG	
22 Jun 2022	900392	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	o-Xylene	85	Y	REG	
22 Jun 2022	900392	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Toluene	88	Y	REG	
22 Jun 2022	900392	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	87	Y	REG	
24 Jun 2022	900799	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Benzene	97	Y	REG	
24 Jun 2022	900799	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	95	Y	REG	
24 Jun 2022	900799	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	96	Y	REG	
24 Jun 2022	900799	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Naphthalene	95	Y	REG	
24 Jun 2022	900799	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	o-Xylene	93	Y	REG	
24 Jun 2022	900799	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Toluene	97	Y	REG	
24 Jun 2022	900799	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	TRH C6-C10	78	Y	REG	
24 Jun 2022	900799	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	TRH C6-C9	83	Y	REG	
24 Jun 2022	900799	WATER	TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	94	Y	REG	
26 Oct 2021	835522	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	Benzene	120	Y	REG	
26 Oct 2021	835522	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	90	Y	REG	
26 Oct 2021	835522	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	100	Y	REG	
26 Oct 2021	835522	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	o-Xylene	82	Y	REG	
26 Oct 2021	835522	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	Toluene	96	Y	REG	
26 Oct 2021	835522	WATER	AI_TS	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	89	Y	REG	
27 Oct 2021	836571	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Benzene	120	Y	REG	
27 Oct 2021	836571	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	110	Y	REG	
27 Oct 2021	836571	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	110	Y	REG	
27 Oct 2021	836571	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	o-Xylene	100	Y	REG	
27 Oct 2021	836571	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Toluene	110	Y	REG	
27 Oct 2021	836571	WATER	AI_TRIP SPIKE	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	100	Y	REG	

Lab Duplicates with high RPDs

SDG	Lab_Report_Number	Matrix_Type	Lab_Duplicate	Field_ID	Depth	Sampled_Date-Time	Method_Name	Compound	Parent_Result	Dupe_Result	Result_Unit	EQL	RPD
	ES2204594	WATER	QC-4172489-006_ES2204594			9/02/2022	EG020T: Total Metals by ICP-MS	Nickel	0.002	0.001	mg/L	0.001 mg/L	67
	ES2204594	WATER	QC-4172489-006_ES2204594			9/02/2022	EG020T: Total Metals by ICP-MS	Copper	0.002	0.001	mg/L	0.001 mg/L	67
	ES2141124	SOIL	QC-MRG2-4018546018_ES2141124			12/11/2021	EG005(ED093)T: Total Metals by ICP-AES	Chromium	64	111	mg/kg	2 mg/kg	54
	ES2141125	SOIL	QC-MRG2-4018546018_ES2141125			12/11/2021	EG005(ED093)T: Total Metals by ICP-AES	Chromium	64	111	mg/kg	2 mg/kg	54
05 Nov 2021	838534	SOIL	S21-No14184-DUP	AI_TP246_0.1	0.1 - 0.1	1/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Lead	17	8.4	MG/KG	5 mg/kg	68
05 Nov 2021	838534	SOIL	S21-No14184-DUP	AI_TP246_0.1	0.1 - 0.1	1/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Arsenic	4.1	2.4	MG/KG	2 mg/kg	52
05 Nov 2021	838534	SOIL	S21-No14184-DUP	AI_TP246_0.1	0.1 - 0.1	1/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Copper	12	5.6	MG/KG	5 mg/kg	73
05 Nov 2021	838534	SOIL	S21-No14184-DUP	AI_TP246_0.1	0.1 - 0.1	1/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Zinc	27	12	MG/KG	5 mg/kg	77
05 Nov 2021	838537	SOIL	S21-No14268-DUP	AI_TP233_0.3	0.3 - 0.3	3/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Nickel	7.7	15	MG/KG	5 mg/kg	64
05 Nov 2021	838537	SOIL	S21-No14268-DUP	AI_TP233_0.3	0.3 - 0.3	3/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Zinc	16	38	MG/KG	5 mg/kg	81
05 Nov 2021	838537	SOIL	S21-No14271-DUP	AI_TP231_0.1	0.1 - 0.1	3/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Lead	13	26	MG/KG	5 mg/kg	67
05 Nov 2021	838537	SOIL	S21-No14271-DUP	AI_TP231_0.1	0.1 - 0.1	3/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Nickel	5.3	10	MG/KG	5 mg/kg	61
05 Nov 2021	838537	SOIL	S21-No14271-DUP	AI_TP231_0.1	0.1 - 0.1	3/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Arsenic	6.5	13	MG/KG	2 mg/kg	67
05 Nov 2021	838537	SOIL	S21-No14271-DUP	AI_TP231_0.1	0.1 - 0.1	3/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Chromium	18	31	MG/KG	5 mg/kg	53
05 Nov 2021	838537	SOIL	S21-No14271-DUP	AI_TP231_0.1	0.1 - 0.1	3/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Zinc	14	27	MG/KG	5 mg/kg	63
05 Nov 2021	838538	SOIL	S21-No14299-DUP	AI_TP182_0.1	0.1 - 0.1	3/11/2021	LTM-GEN-7080 Moisture	% Moisture	14	19	%	1 %	30
05 Nov 2021	838539	SOIL	S21-No14321-DUP	AI_TP08_0.3	0.3 - 0.3	4/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Arsenic	7.8	14	MG/KG	2 mg/kg	57
11 Nov 2021	841164	SOIL	S21-No35226-DUP	AI_TP118_0.2	0.2 - 0.2	8/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Zinc	52	71	MG/KG	5 mg/kg	31
11 Nov 2021	841164	SOIL	S21-No35237-DUP	AI_TP95_0.1	0.1 - 0.1	8/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Chromium	16	28	MG/KG	5 mg/kg	55
11 Nov 2021	841164	SOIL	S21-No35276-DUP	AI_20211108_D02	0.1 - 0.1	8/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Nickel	6.9	12	MG/KG	5 mg/kg	54
26 Oct 2021	835522	SOIL	S21-Oc57142-DUP	AI_1B_TP55_0.5	0.5 - 0.5	25/10/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Arsenic	7.8	15	MG/KG	2 mg/kg	63
11 Nov 2021	853609	SOIL	S22-Ja00490-DUP	AI_TP36-0.3	0.3 - 0.3	9/11/2021	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Arsenic	4.9	8.7	MG/KG	2 mg/kg	56
24 Jun 2022	900799	WATER	S22-Jn0058973-DUP	MW02		24/06/2022	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Arsenic (filtered)	0.002	0.001	MG/L	0.001 mg/L	67
24 Jun 2022	900799	WATER	S22-Jn0058973-DUP	MW02		24/06/2022	LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS	Cadmium (filtered)	<0.0002	0.0004	MG/L	0.0002 mg/L	67

Matrix Spike Recoveries less than 30% or greater than 150% or outside lab LCL or UCL

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
	ES2139396	SOIL	26/10/2021	EP231D: (n:2) Fluorotelomer Sulfonic Acids	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	151	REG	69.2	143	Recove	Recovery > upper data quality objective (DQO)
	ES2139396	SOIL	26/10/2021	EP231D: (n:2) Fluorotelomer Sulfonic Acids	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	140	REG	65	137	Recove	Recovery > upper data quality objective (DQO)
	ES2139396	SOIL	26/10/2021	EP231D: (n:2) Fluorotelomer Sulfonic Acids	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	153	REG	62	145	Recove	Recovery > upper data quality objective (DQO)
	ES2139572	SOIL	26/10/2021	EP231D: (n:2) Fluorotelomer Sulfonic Acids	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	151	REG	69.2	143	Recove	Recovery > upper data quality objective (DQO)
	ES2139572	SOIL	26/10/2021	EP231D: (n:2) Fluorotelomer Sulfonic Acids	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	140	REG	65	137	Recove	Recovery > upper data quality objective (DQO)
	ES2139572	SOIL	26/10/2021	EP231D: (n:2) Fluorotelomer Sulfonic Acids	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	153	REG	62	145	Recove	Recovery > upper data quality objective (DQO)
	ES2141124	SOIL	2/11/2021	EP075T: Base/Neutral Extractable Surrogates	Anthracene-d10	128	SUR	35	123	Recove	Recovery > upper data quality objective (DQO)
	ES2141125	SOIL	2/11/2021	EP075T: Base/Neutral Extractable Surrogates	Anthracene-d10	128	SUR	35	123	Recove	Recovery > upper data quality objective (DQO)
	ES2204594	WATER	10/02/2022	EP075A: Phenolic Compounds	Phenol	28.1	REG	20	130		

Surrogate Variation > 25% or outside lab LCL or UCL

SDG	Lab_Report_Number	Sample_Type	Matrix_Type	Field_ID	Sampled_Date-Time	Compound	Recovery %	Unit	LCL	UCL	Lab_Comments
ALSE-Sydney 02-Nov-21	ES2139572	Interlab_D	SOIL	1B_20211027_T01	27/10/2021	2.4.6-Tribromophenol	73.7	%	12.5	121	
ALSE-Sydney 12-Nov-21	ES2141124	Interlab_D	SOIL	20211102_T01	2/11/2021	2.4.6-Tribromophenol	72.1	%	40	138	
ALSE-Sydney 12-Nov-21	ES2141124	Interlab_D	SOIL	20211102_T01	2/11/2021	DEF	128	%	35	143	
ALSE-Sydney 12-Nov-21	ES2141124	Interlab_D	SOIL	20211102_T03	2/11/2021	2.4.6-Tribromophenol	70.6	%	40	138	
ALSE-Sydney 12-Nov-21	ES2141124	Interlab_D	SOIL	20211102_T03	2/11/2021	2-Fluorobiphenyl	125	%	35	121	Recovery > upper data quality objective (DQO)
ALSE-Sydney 12-Nov-21	ES2141124	Interlab_D	SOIL	20211102_T03	2/11/2021	DEF	134	%	35	143	
ALSE-Sydney 12-Nov-21	ES2141125	Interlab_D	SOIL	20211028_T01	28/10/2021	2.4.6-Tribromophenol	73.8	%	40	138	
ALSE-Sydney 12-Nov-21	ES2141125	Interlab_D	SOIL	20211028_T01	28/10/2021	DEF	130	%	35	143	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	2.4.6-Tribromophenol	50.3	%	17	125	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	2.4.6-Tribromophenol	60.9	%	10	151	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	Phenol-d6	24.4	%	10	44	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	Phenol-d6	24.1	%	10	69	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	4-Terphenyl-d14	72.6	%	32	112	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	4-Terphenyl-d14	70.5	%	21.4	123	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	Anthracene-d10	69.4	%	27.4	113	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	1.2-Dichlorobenzene-D4	51.2	%	23.6	121	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	2-Chlorophenol-D4	48.8	%	14	94	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	2-Chlorophenol-D4	48.5	%	20.9	130	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	2-Fluorobiphenyl	64.3	%	20	104	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	2-Fluorobiphenyl	44.9	%	27.2	135	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	2-Fluorophenol	37.3	%	10	117	
ALSE-Sydney 10-Feb-22	ES2204594	Interlab_D	WATER	20220209_T01	9/02/2022	Nitrobenzene-D5	58.7	%	29.4	142	
	ES2139572	MS	SOIL		27/10/2021	2.4.6-Tribromophenol	74.6	%	40	138	
	ES2139572	MS	SOIL		27/10/2021	2.4.6-Tribromophenol	64.8	%	12.5	121	
	ES2139572	MS	SOIL		27/10/2021	2-Fluorophenol	126	%	29.4	149	
	ES2141124	MS	SOIL		2/11/2021	Anthracene-d10	128	%	35	123	Recovery > upper data quality objective (DQO)
	ES2141125	MS	SOIL		2/11/2021	Anthracene-d10	128	%	35	123	Recovery > upper data quality objective (DQO)
	ES2141124	LAB_D	SOIL		2/11/2021	1.2-Dichloroethane-D4	73.6	%	72.8	133	
	ES2141124	LAB_D	SOIL		2/11/2021	4-Bromofluorobenzene	73.8	%	71.6	130	
	ES2141125	LAB_D	SOIL		2/11/2021	1.2-Dichloroethane-D4	73.6	%	72.8	133	
	ES2141125	LAB_D	SOIL		2/11/2021	4-Bromofluorobenzene	73.8	%	71.6	130	
	ES2139396	MB	SOIL		2/11/2021	2.4.6-Tribromophenol	43.4	%	10	105	
	ES2139572	MB	SOIL		4/11/2021	2.4.6-Tribromophenol	64.4	%	46	132	
	ES2139572	MB	SOIL		4/11/2021	2.4.6-Tribromophenol	45.2	%	10	105	
	ES2139572	MB	SOIL		4/11/2021	Anthracene-d10	125	%	54	118	Recovery > upper data quality objective (DQO)Recovery > uppe
	ES2139572	MB	SOIL		4/11/2021	Nitrobenzene-D5	65.8	%	49.7	132	
	ES2139572	LAB_D	SOIL		27/10/2021	2.4.6-Tribromophenol	56.8	%	12.5	121	The final results for this regular task or duplicate task was greate
	ES2141124	MB	SOIL		16/11/2021	2.4.6-Tribromophenol	64.4	%	46	132	
	ES2141124	MB	SOIL		16/11/2021	2-Fluorophenol	71	%	27.5	164	
	ES2141125	MB	SOIL		16/11/2021	2.4.6-Tribromophenol	64.4	%	46	132	
	ES2141125	MB	SOIL		16/11/2021	2-Fluorophenol	71	%	27.5	164	
	ES2141124	LAB_D	SOIL		2/11/2021	2.4.6-Tribromophenol	72.8	%	40	138	
	ES2141124	LAB_D	SOIL		2/11/2021	2-Fluorophenol	70.9	%	29.4	149	
	ES2141124	LAB_D	SOIL		2/11/2021	DEF	129	%	35	143	
	ES2141125	LAB_D	SOIL		2/11/2021	2.4.6-Tribromophenol	72.8	%	40	138	
	ES2141125	LAB_D	SOIL		2/11/2021	2-Fluorophenol	70.9	%	29.4	149	
	ES2141125	LAB_D	SOIL		2/11/2021	DEF	129	%	35	143	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.1	17/12/2021	Phenol-d6 (surr.)	60	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	85	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	50	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.1	17/12/2021	13C2-8:2 FTSA (surr.)	67	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	Triphenylphosphate (surr.)	69	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	44	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	85	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	66	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	13C5-PFNA (surr.)	68	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	57	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	Dibutylchlorendate (surr.)	58	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	2-Fluorobiphenyl (surr.)	74	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	Tetrachloro-m-xylene (surr.)	68	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	D5-N-EtFOSA (surr.)	128	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP225_0.4	17/12/2021	D9-N-EtFOSE (surr.)	130	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.1	17/12/2021	Phenol-d6 (surr.)	61	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	87	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	136	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.1	17/12/2021	13C2-PFUnDA (surr.)	74	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.1	17/12/2021	13C2-PFTeDA (surr.)	74	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.1	17/12/2021	13C5-PFNA (surr.)	74	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.4	17/12/2021	Phenol-d6 (surr.)	71	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP216_0.4	17/12/2021	13C2-PFUnDA (surr.)	68	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	74	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	138	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	68	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	13C2-PFUnDA (surr.)	69	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	13C2-PFTeDA (surr.)	70	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	13C4-PFHpA (surr.)	73	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	13C8-FOSA (surr.)	68	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	D5-N-EtFOSAA (surr.)	66	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	Nitrobenzene-d5 (surr.)	128	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	D3-N-MeFOSAA (surr.)	74	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.1	17/12/2021	D3-N-MeFOSA (surr.)	72	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.4	17/12/2021	Triphenylphosphate (surr.)	74	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	91	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	66	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	73	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.4	17/12/2021	Dibutylchlorendate (surr.)	61	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP197_0.4	17/12/2021	D5-N-EtFOSA (surr.)	134	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.1	17/12/2021	Phenol-d6 (surr.)	65	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	105	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	170	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	132	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.1	17/12/2021	13C2-PFTeDA (surr.)	73	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.4	17/12/2021	Phenol-d6 (surr.)	69	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.4	17/12/2021	13C2-4:2 FTSA (surr.)	126	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	52	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.4	17/12/2021	13C5-PFNA (surr.)	69	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.4	17/12/2021	D5-N-EtFOSA (surr.)	127	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP179_0.4	17/12/2021	D7-N-MeFOSE (surr.)	139	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.1	17/12/2021	Phenol-d6 (surr.)	68	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.1	17/12/2021	Nitrobenzene-d5 (surr.)	128	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.4	17/12/2021	Phenol-d6 (surr.)	68	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.4	17/12/2021	13C2-4:2 FTSA (surr.)	132	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.4	17/12/2021	2-Fluorobiphenyl (surr.)	67	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.4	17/12/2021	D5-N-EtFOSA (surr.)	127	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.4	17/12/2021	D7-N-MeFOSE (surr.)	135	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP184_0.4	17/12/2021	D9-N-EtFOSE (surr.)	132	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.1	17/12/2021	Phenol-d6 (surr.)	52	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	132	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.1	17/12/2021	D7-N-MeFOSE (surr.)	128	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.1	17/12/2021	D9-N-EtFOSE (surr.)	127	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.4	17/12/2021	Phenol-d6 (surr.)	67	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.4	17/12/2021	13C2-4:2 FTSA (surr.)	131	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP178_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	47	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.1	17/12/2021	Phenol-d6 (surr.)	56	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	131	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	56	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.1	17/12/2021	13C6-PFDA (surr.)	131	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.4	17/12/2021	Phenol-d6 (surr.)	56	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	39	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP177_0.4	17/12/2021	D9-N-EtFOSE (surr.)	139	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	148	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.1	17/12/2021	13C6-PFDA (surr.)	126	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.1	17/12/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.1	17/12/2021	2-Fluorobiphenyl (surr.)	135	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.1	17/12/2021	D9-N-EtFOSE (surr.)	142	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	36	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	13C6-PFDA (surr.)	129	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	147	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	Toluene-d8 (surr.)	67	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	2-Fluorobiphenyl (surr.)	62	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	D5-N-EtFOSAA (surr.)	65	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	Nitrobenzene-d5 (surr.)	56	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	4-Bromofluorobenzene (surr.)	67	%	50	150	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	Tetrachloro-m-xylene (surr.)	127	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	D3-N-MeFOSAA (surr.)	66	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	D5-N-EtFOSA (surr.)	126	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP173_0.4	17/12/2021	D7-N-MeFOSE (surr.)	128	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	73	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.1	17/12/2021	p-Terphenyl-d14 (surr.)	140	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.1	17/12/2021	D7-N-MeFOSE (surr.)	126	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	62	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	135	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.4	17/12/2021	D7-N-MeFOSE (surr.)	139	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP66_0.4	17/12/2021	D9-N-EtFOSE (surr.)	129	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	106	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.1	17/12/2021	13C6-PFDA (surr.)	136	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.1	17/12/2021	p-Terphenyl-d14 (surr.)	130	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.1	17/12/2021	D5-N-EtFOSA (surr.)	133	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.1	17/12/2021	D7-N-MeFOSE (surr.)	126	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	94	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	68	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.4	17/12/2021	13C6-PFDA (surr.)	130	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP42_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	133	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	59	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	52	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.1	17/12/2021	p-Terphenyl-d14 (surr.)	138	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.1	17/12/2021	D3-N-MeFOSA (surr.)	132	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	104	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	73	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	142	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.4	17/12/2021	2-Fluorobiphenyl (surr.)	126	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.4	17/12/2021	Nitrobenzene-d5 (surr.)	127	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.4	17/12/2021	Tetrachloro-m-xylene (surr.)	132	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.4	17/12/2021	D7-N-MeFOSE (surr.)	138	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP32_0.4	17/12/2021	D9-N-EtFOSE (surr.)	130	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	13C2-10:2 FTSA (surr.)	105	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	13C2-4:2 FTSA (surr.)	155	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	13C2-6:2 FTSA (surr.)	65	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	13C2-8:2 FTSA (surr.)	126	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	13C6-PFDA (surr.)	153	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	p-Terphenyl-d14 (surr.)	139	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	2-Fluorobiphenyl (surr.)	131	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	D5-N-EtFOSA (surr.)	137	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	D7-N-MeFOSE (surr.)	152	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP18_0.2	17/12/2021	D9-N-EtFOSE (surr.)	167	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	145	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	70	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	13C2-PFTeDA (surr.)	51	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	13C5-PFNA (surr.)	73	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	13C8-FOSA (surr.)	55	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	p-Terphenyl-d14 (surr.)	140	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	Toluene-d8 (surr.)	66	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	2-Fluorobiphenyl (surr.)	130	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	D5-N-EtFOSAA (surr.)	69	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	Nitrobenzene-d5 (surr.)	129	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	D3-N-MeFOSA (surr.)	66	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.1	17/12/2021	D7-N-MeFOSE (surr.)	68	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.3	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.3	17/12/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.3	17/12/2021	13C2-4:2 FTSA (surr.)	134	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.3	17/12/2021	13C2-6:2 FTSA (surr.)	61	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.3	17/12/2021	13C2-8:2 FTSA (surr.)	67	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.3	17/12/2021	p-Terphenyl-d14 (surr.)	136	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.3	17/12/2021	Tetrachloro-m-xylene (surr.)	130	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP25_0.3	17/12/2021	D7-N-MeFOSE (surr.)	127	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	86	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	58	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.1	17/12/2021	13C5-PFNA (surr.)	73	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.1	17/12/2021	p-Terphenyl-d14 (surr.)	141	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.1	17/12/2021	D5-N-EtFOSA (surr.)	126	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	44	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	139	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP23_0.4	17/12/2021	Tetrachloro-m-xylene (surr.)	129	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.1	17/12/2021	Phenol-d6 (surr.)	74	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	76	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.1	17/12/2021	13C2-8:2 FTSA (surr.)	66	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.1	17/12/2021	13C2-PFUnDA (surr.)	65	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.1	17/12/2021	13C2-PFTeDA (surr.)	70	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.1	17/12/2021	13C5-PFNA (surr.)	62	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.1	17/12/2021	13C8-FOSA (surr.)	73	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.1	17/12/2021	p-Terphenyl-d14 (surr.)	132	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.3	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.3	17/12/2021	13C2-10:2 FTSA (surr.)	101	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.3	17/12/2021	13C2-6:2 FTSA (surr.)	50	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.3	17/12/2021	p-Terphenyl-d14 (surr.)	141	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.3	17/12/2021	Tetrachloro-m-xylene (surr.)	132	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.3	17/12/2021	D5-N-EtFOSA (surr.)	129	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.3	17/12/2021	D7-N-MeFOSE (surr.)	139	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP16_0.3	17/12/2021	D9-N-EtFOSE (surr.)	131	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	94	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	129	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0.1	17/12/2021	p-Terphenyl-d14 (surr.)	127	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0.1	17/12/2021	D5-N-EtFOSA (surr.)	134	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0	17/12/2021	2.4.6-Tribromophenol (surr.)	53	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0	17/12/2021	Phenol-d6 (surr.)	64	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0	17/12/2021	13C2-10:2 FTSA (surr.)	103	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0	17/12/2021	13C2-6:2 FTSA (surr.)	49	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0	17/12/2021	13C6-PFDA (surr.)	130	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0	17/12/2021	Dibutylchlorendate (surr.)	72	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0	17/12/2021	D5-N-EtFOSA (surr.)	134	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0	17/12/2021	D7-N-MeFOSE (surr.)	128	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP06_0	17/12/2021	D9-N-EtFOSE (surr.)	126	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	150	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.1	17/12/2021	13C6-PFDA (surr.)	126	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.1	17/12/2021	p-Terphenyl-d14 (surr.)	149	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.1	17/12/2021	Toluene-d8 (surr.)	69	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.1	17/12/2021	2-Fluorobiphenyl (surr.)	140	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.1	17/12/2021	Nitrobenzene-d5 (surr.)	136	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.1	17/12/2021	D9-N-EtFOSE (surr.)	127	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	91	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.4	17/12/2021	13C2-4:2 FTSA (surr.)	142	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.4	17/12/2021	13C6-PFDA (surr.)	131	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.4	17/12/2021	2-Fluorobiphenyl (surr.)	140	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.4	17/12/2021	Nitrobenzene-d5 (surr.)	137	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.4	17/12/2021	Tetrachloro-m-xylene (surr.)	149	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP09_0.4	17/12/2021	D5-N-EtFOSA (surr.)	140	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	144	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	52	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.1	17/12/2021	13C6-PFDA (surr.)	126	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.1	17/12/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.4	17/12/2021	13C2-6:2 FTSA (surr.)	64	%	20	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.4	17/12/2021	2-Fluorobiphenyl (surr.)	148	%	30	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.4	17/12/2021	Nitrobenzene-d5 (surr.)	129	%	70	130	
20 Dec 2021	852528	Normal	SOIL	AI_TP14_0.4	17/12/2021	Tetrachloro-m-xylene (surr.)	143	%	70	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments				
20 Dec 2021	852528	Normal	SOIL	AI_TP24_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP24_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	92	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP24_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	74	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP24_0.1	17/12/2021	Nitrobenzene-d5 (surr.)	143	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP24_0.3	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP24_0.3	17/12/2021	13C2-10:2 FTSA (surr.)	96	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP24_0.3	17/12/2021	13C2-6:2 FTSA (surr.)	59	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	99	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	151	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	59	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.1	17/12/2021	13C2-PFTeDA (surr.)	71	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.1	17/12/2021	Nitrobenzene-d5 (surr.)	130	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.3	17/12/2021	Triphenylphosphate (surr.)	149	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.3	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.3	17/12/2021	13C2-10:2 FTSA (surr.)	102	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.3	17/12/2021	13C2-4:2 FTSA (surr.)	142	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.3	17/12/2021	13C6-PFDA (surr.)	128	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.3	17/12/2021	p-Terphenyl-d14 (surr.)	132	%	30	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.3	17/12/2021	Nitrobenzene-d5 (surr.)	126	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP19_0.3	17/12/2021	Tetrachloro-m-xylene (surr.)	130	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP45_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP45_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	101	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP45_0.1	17/12/2021	13C6-PFDA (surr.)	131	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP45_0.1	17/12/2021	Nitrobenzene-d5 (surr.)	127	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP45_0.3	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP45_0.3	17/12/2021	Phenol-d6 (surr.)	70	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP45_0.3	17/12/2021	13C2-10:2 FTSA (surr.)	97	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP45_0.3	17/12/2021	13C2-8:2 FTSA (surr.)	128	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP45_0.3	17/12/2021	13C2-PFUnDA (surr.)	72	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.1	17/12/2021	Phenol-d6 (surr.)	58	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	99	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	133	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.1	17/12/2021	13C2-PFUnDA (surr.)	72	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.1	17/12/2021	D7-N-MeFOSE (surr.)	135	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	Phenol-d6 (surr.)	61	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	80	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	13C2-PFDoDA (surr.)	67	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	13C2-PFUnDA (surr.)	54	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	13C4-PFHpA (surr.)	70	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	13C5-PFHxA (surr.)	69	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	13C5-PFNA (surr.)	71	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	13C5-PFPeA (surr.)	66	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	130	%	30	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	18O2-PFHxS (surr.)	73	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	D5-N-EtFOSAA (surr.)	59	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	Tetrachloro-m-xylene (surr.)	131	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	D3-N-MeFOSAA (surr.)	58	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP67_0.4	17/12/2021	D3-N-MeFOSA (surr.)	68	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.1	17/12/2021	Phenol-d6 (surr.)	70	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	101	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.1	17/12/2021	13C2-4:2 FTSA (surr.)	134	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.1	17/12/2021	13C2-8:2 FTSA (surr.)	126	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.1	17/12/2021	13C2-PFUnDA (surr.)	72	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.4	17/12/2021	Phenol-d6 (surr.)	63	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	100	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	132	%	30	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.4	17/12/2021	Dibutylchlorendate (surr.)	135	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.4	17/12/2021	D5-N-EtFOSAA (surr.)	71	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.4	17/12/2021	Tetrachloro-m-xylene (surr.)	145	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.4	17/12/2021	D3-N-MeFOSAA (surr.)	69	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP20_0.4	17/12/2021	D9-N-EtFOSE (surr.)	143	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.1	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.1	17/12/2021	Phenol-d6 (surr.)	67	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.1	17/12/2021	13C2-10:2 FTSA (surr.)	96	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.1	17/12/2021	13C2-6:2 FTSA (surr.)	57	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.4	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.4	17/12/2021	Phenol-d6 (surr.)	66	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.4	17/12/2021	13C2-10:2 FTSA (surr.)	98	%	0	0					
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.4	17/12/2021	p-Terphenyl-d14 (surr.)	128	%	30	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.4	17/12/2021	Nitrobenzene-d5 (surr.)	137	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.4	17/12/2021	Tetrachloro-m-xylene (surr.)	136	%	70	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.4	17/12/2021	D7-N-MeFOSE (surr.)	129	%	20	130					
20 Dec 2021	852528	Normal	SOIL	AI_TP36_0.4	17/12/2021	D9-N-EtFOSE (surr.)	139	%	20	130					
20 Dec 2021	852528	Field_D	SOIL	AI_20212117_D01	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Field_D	SOIL	AI_20212117_D01	17/12/2021	Phenol-d6 (surr.)	62	%	20	130					
20 Dec 2021	852528	Field_D	SOIL	AI_20212117_D02	17/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
20 Dec 2021	852528	Field_D	SOIL	AI_20212117_D02	17/12/2021	Phenol-d6 (surr.)	63	%	20	130					
20 Dec 2021	852528	Field_D	SOIL	AI_20212117_D02	17/12/2021	13C2-10:2 FTSA (surr.)	78	%	0	0					
20 Dec 2021	852528	Field_D	SOIL	AI_20212117_D02	17/12/2021	13C2-4:2 FTSA (surr.)	130	%	20	130					
20 Dec 2021	852528	Field_D	SOIL	AI_20212117_D02	17/12/2021	13C2-6:2 FTSA (surr.)	52	%	20	130					
20 Dec 2021	852528	Field_D	SOIL	AI_20212117_D02	17/12/2021	13C2-PFUnDA (surr.)	73	%	20	130					
20 Dec 2021	852528	Field_D	SOIL	AI_20212117_D02	17/12/2021	D3-N-MeFOSAA (surr.)	63	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	121	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.1	20/12/2021	13C2-4:2 FTSA (surr.)	126	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.1	20/12/2021	13C2-6:2 FTSA (surr.)	144	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.1	20/12/2021	Nitrobenzene-d5 (surr.)	145	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.4	20/12/2021	Triphenylphosphate (surr.)	144	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	130	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.4	20/12/2021	13C2-4:2 FTSA (surr.)	138	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.4	20/12/2021	Toluene-d8 (surr.)	70	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.4	20/12/2021	D5-N-EtFOSAA (surr.)	49	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.4	20/12/2021	4-Bromofluorobenzene (surr.)	63	%	50	150					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.4	20/12/2021	D3-N-MeFOSAA (surr.)	45	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP27_0.4	20/12/2021	D5-N-EtFOSA (surr.)	131	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP28_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP28_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	136	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP28_0.1	20/12/2021	Nitrobenzene-d5 (surr.)	147	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP28_0.5	20/12/2021	Triphenylphosphate (surr.)	145	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP28_0.5	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP28_0.5	20/12/2021	13C2-10:2 FTSA (surr.)	151	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP28_0.5	20/12/2021	13C2-6:2 FTSA (surr.)	126	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP28_0.5	20/12/2021	Nitrobenzene-d5 (surr.)	143	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	148	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.1	20/12/2021	13C2-4:2 FTSA (surr.)	130	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.1	20/12/2021	p-Terphenyl-d14 (surr.)	132	%	30	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.1	20/12/2021	Toluene-d8 (surr.)	127	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.1	20/12/2021	Nitrobenzene-d5 (surr.)	132	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.5	20/12/2021	Triphenylphosphate (surr.)	131	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.5	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.5	20/12/2021	13C2-10:2 FTSA (surr.)	146	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.5	20/12/2021	13C2-PFUnDA (surr.)	132	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.5	20/12/2021	2-Fluorobiphenyl (surr.)	54	%	30	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP60_0.5	20/12/2021	D5-N-EtFOSA (surr.)	137	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	137	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.1	20/12/2021	13C2-6:2 FTSA (surr.)	139	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.1	20/12/2021	p-Terphenyl-d14 (surr.)	130	%	30	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.1	20/12/2021	Toluene-d8 (surr.)	60	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.1	20/12/2021	Nitrobenzene-d5 (surr.)	132	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.1	20/12/2021	4-Bromofluorobenzene (surr.)	57	%	50	150					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.1	20/12/2021	D7-N-MeFOSE (surr.)	129	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.4	20/12/2021	Triphenylphosphate (surr.)	138	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	129	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.4	20/12/2021	13C2-4:2 FTSA (surr.)	61	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.4	20/12/2021	2-Fluorobiphenyl (surr.)	57	%	30	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.4	20/12/2021	D5-N-EtFOSA (surr.)	132	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP59_0.4	20/12/2021	D7-N-MeFOSE (surr.)	133	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP58_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP58_0.1	20/12/2021	Phenol-d6 (surr.)	70	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP58_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	132	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP58_0.1	20/12/2021	13C2-6:2 FTSA (surr.)	128	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP58_0.1	20/12/2021	p-Terphenyl-d14 (surr.)	127	%	30	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP58_0.1	20/12/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP58_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP58_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	136	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	144	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.1	20/12/2021	13C2-6:2 FTSA (surr.)	137	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.1	20/12/2021	13C2-8:2 FTSA (surr.)	127	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.1	20/12/2021	13C6-PFDA (surr.)	129	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.1	20/12/2021	Nitrobenzene-d5 (surr.)	136	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.1	20/12/2021	D5-N-EtFOSA (surr.)	133	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	Triphenylphosphate (surr.)	127	%	70	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT				
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	161	%	0	0					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	13C2-PFUnDA (surr.)	143	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	13C4-PFBA (surr.)	129	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	13C4-PFHpA (surr.)	126	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	13C5-PFNA (surr.)	127	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	13C5-PFPeA (surr.)	135	%	20	130					
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	13C6-PFDA (surr.)	134	%	20	130					

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	13C8-PFOA (surr.)	133	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	13C8-PFOS (surr.)	135	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	Toluene-d8 (surr.)	73	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	Nitrobenzene-d5 (surr.)	135	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	4-Bromofluorobenzene (surr.)	67	%	50	150	
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	D5-N-EtFOSA (surr.)	165	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	D7-N-MeFOSE (surr.)	147	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP46_0.4	20/12/2021	D9-N-EtFOSE (surr.)	131	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	Phenol-d6 (surr.)	71	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	138	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	13C2-4:2 FTSA (surr.)	182	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	13C2-6:2 FTSA (surr.)	176	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	13C4-PFHpA (surr.)	140	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	13C5-PFHxA (surr.)	127	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	13C5-PFNA (surr.)	131	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	13C6-PFDA (surr.)	146	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	Nitrobenzene-d5 (surr.)	137	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.1	20/12/2021	D5-N-EtFOSA (surr.)	127	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.4	20/12/2021	Triphenylphosphate (surr.)	127	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.4	20/12/2021	Phenol-d6 (surr.)	67	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	168	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.4	20/12/2021	13C2-PFUnDA (surr.)	132	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.4	20/12/2021	13C6-PFDA (surr.)	128	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.4	20/12/2021	2-Fluorobiphenyl (surr.)	63	%	30	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.4	20/12/2021	D5-N-EtFOSAA (surr.)	71	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.4	20/12/2021	Nitrobenzene-d5 (surr.)	74	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP47_0.4	20/12/2021	D3-N-MeFOSAA (surr.)	74	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	124	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.1	20/12/2021	p-Terphenyl-d14 (surr.)	135	%	30	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.1	20/12/2021	Nitrobenzene-d5 (surr.)	150	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	Triphenylphosphate (surr.)	147	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	151	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	13C2-PFUnDA (surr.)	140	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	13C5-PFHxA (surr.)	134	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	13C5-PFNA (surr.)	132	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	13C6-PFDA (surr.)	136	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	13C8-PFOS (surr.)	129	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	Nitrobenzene-d5 (surr.)	144	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	D5-N-EtFOSA (surr.)	126	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	D7-N-MeFOSE (surr.)	149	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP37_0.4	20/12/2021	D9-N-EtFOSE (surr.)	133	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	152	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.1	20/12/2021	13C2-PFUnDA (surr.)	133	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.1	20/12/2021	13C5-PFHxA (surr.)	127	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.1	20/12/2021	p-Terphenyl-d14 (surr.)	148	%	30	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.1	20/12/2021	2-Fluorobiphenyl (surr.)	64	%	30	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.1	20/12/2021	D5-N-EtFOSA (surr.)	146	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.1	20/12/2021	D7-N-MeFOSE (surr.)	146	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	111	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	13C2-4:2 FTSA (surr.)	61	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	13C2-6:2 FTSA (surr.)	71	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	13C3-PFBS (surr.)	73	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	p-Terphenyl-d14 (surr.)	128	%	30	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	Dibutylchlorendate (surr.)	131	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	2-Fluorobiphenyl (surr.)	54	%	30	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	D5-N-EtFOSAA (surr.)	64	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP48_0.4	20/12/2021	D3-N-MeFOSAA (surr.)	69	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	110	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.1	20/12/2021	13C2-4:2 FTSA (surr.)	134	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.1	20/12/2021	13C2-PFTeDA (surr.)	63	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	Triphenylphosphate (surr.)	126	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	143	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	13C2-4:2 FTSA (surr.)	62	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	13C2-6:2 FTSA (surr.)	69	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	13C2-8:2 FTSA (surr.)	70	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	13C2-PFUnDA (surr.)	128	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	p-Terphenyl-d14 (surr.)	133	%	30	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	Toluene-d8 (surr.)	74	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	4-Bromofluorobenzene (surr.)	66	%	50	150	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	D5-N-EtFOSA (surr.)	140	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP61_0.4	20/12/2021	D7-N-MeFOSE (surr.)	129	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP62_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP62_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	132	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP62_0.1	20/12/2021	D7-N-MeFOSE (surr.)	128	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP62_0.4	20/12/2021	Triphenylphosphate (surr.)	126	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP62_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP62_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	129	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP62_0.4	20/12/2021	p-Terphenyl-d14 (surr.)	143	%	30	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP62_0.4	20/12/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	159	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.1	20/12/2021	13C2-8:2 FTSA (surr.)	140	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.1	20/12/2021	13C2-PFUnDA (surr.)	127	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.1	20/12/2021	13C6-PFDA (surr.)	127	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.1	20/12/2021	4-Bromofluorobenzene (surr.)	67	%	50	150	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.1	20/12/2021	D5-N-EtFOSA (surr.)	152	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.1	20/12/2021	D7-N-MeFOSE (surr.)	141	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.1	20/12/2021	D9-N-EtFOSE (surr.)	137	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	133	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.4	20/12/2021	p-Terphenyl-d14 (surr.)	130	%	30	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.4	20/12/2021	Nitrobenzene-d5 (surr.)	68	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.4	20/12/2021	D5-N-EtFOSA (surr.)	136	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP71_0.4	20/12/2021	D7-N-MeFOSE (surr.)	137	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	150	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.1	20/12/2021	D5-N-EtFOSA (surr.)	135	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.1	20/12/2021	D7-N-MeFOSE (surr.)	145	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.4	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.4	20/12/2021	Phenol-d6 (surr.)	73	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.4	20/12/2021	13C2-10:2 FTSA (surr.)	131	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.4	20/12/2021	13C2-4:2 FTSA (surr.)	50	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.4	20/12/2021	13C2-6:2 FTSA (surr.)	57	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.4	20/12/2021	D5-N-EtFOSAA (surr.)	73	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP105_0.4	20/12/2021	D5-N-EtFOSA (surr.)	135	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.1	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.1	20/12/2021	13C2-10:2 FTSA (surr.)	122	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.1	20/12/2021	13C2-8:2 FTSA (surr.)	127	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.1	20/12/2021	13C3-PFBS (surr.)	73	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.5	20/12/2021	Triphenylphosphate (surr.)	137	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.5	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.5	20/12/2021	13C2-10:2 FTSA (surr.)	131	%	0	0	
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.5	20/12/2021	p-Terphenyl-d14 (surr.)	126	%	30	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.5	20/12/2021	Nitrobenzene-d5 (surr.)	144	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.5	20/12/2021	Tetrachloro-m-xylene (surr.)	131	%	70	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.5	20/12/2021	D5-N-EtFOSA (surr.)	139	%	20	130	
21 Dec 2021	852729	Normal	SOIL	AI_TP108_0.5	20/12/2021	D7-N-MeFOSE (surr.)	130	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	Triphenylphosphate (surr.)	146	%	70	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	13C2-10:2 FTSA (surr.)	129	%	0	0	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	13C2-4:2 FTSA (surr.)	152	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	13C2-6:2 FTSA (surr.)	154	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	13C2-8:2 FTSA (surr.)	128	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	13C4-PFHpA (surr.)	130	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	13C6-PFDA (surr.)	128	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	Dibutylchlorendate (surr.)	127	%	70	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	Nitrobenzene-d5 (surr.)	131	%	70	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D01	20/12/2021	D3-N-MeFOSA (surr.)	71	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D02	20/12/2021	13C2-10:2 FTSA (surr.)	135	%	0	0	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D02	20/12/2021	D5-N-EtFOSA (surr.)	127	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D03	20/12/2021	Triphenylphosphate (surr.)	129	%	70	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D03	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D03	20/12/2021	13C2-10:2 FTSA (surr.)	136	%	0	0	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D03	20/12/2021	13C2-4:2 FTSA (surr.)	167	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D03	20/12/2021	13C2-6:2 FTSA (surr.)	158	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_D03	20/12/2021	13C5-PFNA (surr.)	129	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T03	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T03	20/12/2021	Phenol-d6 (surr.)	73	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T03	20/12/2021	13C2-10:2 FTSA (surr.)	118	%	0	0	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T03	20/12/2021	13C2-8:2 FTSA (surr.)	40	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T03	20/12/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T02	20/12/2021	13C2-10:2 FTSA (surr.)	121	%	0	0	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T01	20/12/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T01	20/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T01	20/12/2021	13C2-10:2 FTSA (surr.)	116	%	0	0	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T01	20/12/2021	13C2-4:2 FTSA (surr.)	176	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T01	20/12/2021	13C2-PFTeDA (surr.)	70	%	20	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T01	20/12/2021	p-Terphenyl-d14 (surr.)	144	%	30	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T01	20/12/2021	Dibutylchlorendate (surr.)	132	%	70	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T01	20/12/2021	2-Fluorobiphenyl (surr.)	126	%	30	130	
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T01	20/12/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
21 Dec 2021	852729	Field_D	SOIL	AI_20211220_T01	20/12/2021	Tetrachloro-m-xylene (surr.)	136	%	70	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.1	21/12/2021	Phenol-d6 (surr.)	70	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.1	21/12/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.1	21/12/2021	13C2-PFUnDA (surr.)	65	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.1	21/12/2021	13C5-PFPeA (surr.)	69	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.1	21/12/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.1	21/12/2021	D3-N-MeFOSA (surr.)	74	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.4	21/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.4	21/12/2021	13C2-10:2 FTSA (surr.)	107	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.4	21/12/2021	13C2-6:2 FTSA (surr.)	126	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.4	21/12/2021	13C2-8:2 FTSA (surr.)	142	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.4	21/12/2021	D5-N-EtFOSA (surr.)	127	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.4	21/12/2021	D7-N-MeFOSE (surr.)	132	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP76_0.4	21/12/2021	D9-N-EtFOSE (surr.)	151	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP75_0.1	21/12/2021	2.4.6-Tribromophenol (surr.)	59	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP75_0.1	21/12/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP75_0.1	21/12/2021	13C2-4:2 FTSA (surr.)	134	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP75_0.1	21/12/2021	13C2-6:2 FTSA (surr.)	62	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP75_0.1	21/12/2021	13C2-PFUnDA (surr.)	68	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP75_0.1	21/12/2021	D3-N-MeFOSA (surr.)	71	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP75_0.4	21/12/2021	2.4.6-Tribromophenol (surr.)	64	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP75_0.4	21/12/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP75_0.4	21/12/2021	13C2-4:2 FTSA (surr.)	145	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.1	21/12/2021	2.4.6-Tribromophenol (surr.)	75	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.1	21/12/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.1	21/12/2021	13C2-4:2 FTSA (surr.)	164	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.1	21/12/2021	13C2-8:2 FTSA (surr.)	142	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.1	21/12/2021	13C2-PFUnDA (surr.)	72	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.1	21/12/2021	Toluene-d8 (surr.)	67	%	70	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.1	21/12/2021	4-Bromofluorobenzene (surr.)	65	%	50	150	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.1	21/12/2021	D3-N-MeFOSA (surr.)	66	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.4	21/12/2021	2.4.6-Tribromophenol (surr.)	74	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.4	21/12/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.4	21/12/2021	13C2-4:2 FTSA (surr.)	136	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.4	21/12/2021	13C2-8:2 FTSA (surr.)	133	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP86_0.4	21/12/2021	D3-N-MeFOSA (surr.)	71	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP79_0.4	21/12/2021	2.4.6-Tribromophenol (surr.)	57	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP79_0.4	21/12/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP79_0.4	21/12/2021	13C2-PFUnDA (surr.)	64	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP79_0.4	21/12/2021	13C5-PFPeA (surr.)	69	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP80_0.4	21/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
22 Dec 2021	853214	Normal	SOIL	AI_TP80_0.4	21/12/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP80_0.4	21/12/2021	13C2-PFDoDA (surr.)	70	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP80_0.4	21/12/2021	13C2-PFUnDA (surr.)	62	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP80_0.4	21/12/2021	13C2-PFTeDA (surr.)	60	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP80_0.4	21/12/2021	13C5-PFPeA (surr.)	70	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP80_0.4	21/12/2021	13C8-PFOA (surr.)	73	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP80_0.4	21/12/2021	D5-N-EtFOSAA (surr.)	66	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP80_0.4	21/12/2021	D3-N-MeFOSAA (surr.)	70	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP80_0.4	21/12/2021	D3-N-MeFOSA (surr.)	56	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	2.4.6-Tribromophenol (surr.)	65	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	13C2-10:2 FTSA (surr.)	83	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	13C2-6:2 FTSA (surr.)	60	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	13C2-8:2 FTSA (surr.)	74	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	13C2-PFDoDA (surr.)	71	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	13C2-PFUnDA (surr.)	64	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	13C4-PFHpA (surr.)	69	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	13C5-PFPeA (surr.)	62	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	13C6-PFDA (surr.)	73	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	13C8-PFOA (surr.)	68	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.4	21/12/2021	D5-N-EtFOSAA (surr.)	70	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	2.4.6-Tribromophenol (surr.)	60	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	13C2-10:2 FTSA (surr.)	77	%	0	0	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	13C2-6:2 FTSA (surr.)	69	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	13C2-8:2 FTSA (surr.)	68	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	13C2-PFUnDA (surr.)	65	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	13C2-PFTeDA (surr.)	58	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	13C4-PFHpA (surr.)	73	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	13C5-PFNA (surr.)	62	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	Toluene-d8 (surr.)	57	%	70	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	4-Bromofluorobenzene (surr.)	56	%	50	150	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	D3-N-MeFOSA (surr.)	69	%	20	130	
22 Dec 2021	853214	Normal	SOIL	AI_TP81_0.1	21/12/2021	D7-N-MeFOSE (surr.)	71	%	20	130	
22 Dec 2021	853214	Field_D	SOIL	AI_20211221_D01	21/12/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
22 Dec 2021	853214	Field_D	SOIL	AI_20211221_D01	21/12/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
22 Dec 2021	853214	Field_D	SOIL	AI_20211221_D01	21/12/2021	13C2-4:2 FTSA (surr.)	151	%	20	130	
22 Dec 2021	853214	Field_D	SOIL	AI_20211221_D01	21/12/2021	13C2-6:2 FTSA (surr.)	155	%	20	130	
22 Dec 2021	853214	Field_D	SOIL	AI_20211221_D01	21/12/2021	13C2-8:2 FTSA (surr.)	128	%	20	130	
22 Dec 2021	853214	Field_D	SOIL	AI_20211221_D01	21/12/2021	13C2-PFUnDA (surr.)	70	%	20	130	
22 Dec 2021	853214	Field_D	SOIL	AI_20211221_D01	21/12/2021	Dibutylchlorendate (surr.)	128	%	70	130	
22 Dec 2021	853214	Field_D	SOIL	AI_20211221_D01	21/12/2021	D3-N-MeFOSA (surr.)	71	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	118	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	137	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.1	29/10/2021	13C3-PFBS (surr.)	140	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.1	29/10/2021	Dibutylchlorendate (surr.)	53	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.1	29/10/2021	Toluene-d8 (surr.)	138	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	77	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	135	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	165	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.3	29/10/2021	13C2-6:2 FTSA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.3	29/10/2021	13C3-PFBS (surr.)	143	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.3	29/10/2021	13C5-PFPeA (surr.)	140	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.3	29/10/2021	Dibutylchlorendate (surr.)	57	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP277_0.3	29/10/2021	D3-N-MeFOSA (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	53	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	131	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	147	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.1	29/10/2021	13C3-PFBS (surr.)	141	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.1	29/10/2021	13C5-PFPeA (surr.)	133	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.1	29/10/2021	Dibutylchlorendate (surr.)	57	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.1	29/10/2021	D3-N-MeFOSA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	132	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.3	29/10/2021	13C2-6:2 FTSA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.3	29/10/2021	13C3-PFBS (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.3	29/10/2021	13C5-PFPeA (surr.)	136	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.3	29/10/2021	Dibutylchlorendate (surr.)	62	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP278_0.3	29/10/2021	D3-N-MeFOSA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	124	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.1	29/10/2021	13C3-PFBS (surr.)	148	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.1	29/10/2021	13C5-PFPeA (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.1	29/10/2021	Dibutylchlorendate (surr.)	60	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.1	29/10/2021	D3-N-MeFOSA (surr.)	133	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	112	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	170	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.3	29/10/2021	13C3-PFBS (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.3	29/10/2021	13C6-PFDA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.3	29/10/2021	Dibutylchlorendate (surr.)	63	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP279_0.3	29/10/2021	D3-N-MeFOSA (surr.)	139	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	63	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	126	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	-999	%	20	130	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.1	29/10/2021	13C2-6:2 FTSA (surr.)	137	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.1	29/10/2021	13C3-PFBS (surr.)	141	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.1	29/10/2021	13C6-PFDA (surr.)	132	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.1	29/10/2021	Dibutylchlorendate (surr.)	71	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.1	29/10/2021	D3-N-MeFOSA (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	138	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	149	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.3	29/10/2021	13C2-6:2 FTSA (surr.)	134	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.3	29/10/2021	13C3-PFBS (surr.)	138	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.3	29/10/2021	Dibutylchlorendate (surr.)	70	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.3	29/10/2021	Toluene-d8 (surr.)	69	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP280_0.3	29/10/2021	D3-N-MeFOSA (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	69	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	132	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	161	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.1	29/10/2021	13C2-6:2 FTSA (surr.)	145	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.1	29/10/2021	13C3-PFBS (surr.)	132	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.1	29/10/2021	13C5-PFPeA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.1	29/10/2021	Dibutylchlorendate (surr.)	70	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	71	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	143	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	137	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.3	29/10/2021	13C2-6:2 FTSA (surr.)	136	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.3	29/10/2021	13C2-8:2 FTSA (surr.)	132	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.3	29/10/2021	13C3-PFBS (surr.)	144	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.3	29/10/2021	13C4-PFBA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.3	29/10/2021	Dibutylchlorendate (surr.)	68	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP281_0.3	29/10/2021	D3-N-MeFOSA (surr.)	133	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	58	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	124	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	163	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.1	29/10/2021	13C3-PFBS (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.1	29/10/2021	Nitrobenzene-d5 (surr.)	127	%	70	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	133	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	163	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.3	29/10/2021	13C2-6:2 FTSA (surr.)	132	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.3	29/10/2021	13C3-PFBS (surr.)	137	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.3	29/10/2021	13C5-PFPeA (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP266_0.3	29/10/2021	13C6-PFDA (surr.)	134	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	123	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	140	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.1	29/10/2021	13C3-PFBS (surr.)	132	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.1	29/10/2021	Toluene-d8 (surr.)	58	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.1	29/10/2021	Nitrobenzene-d5 (surr.)	130	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.1	29/10/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.3	29/10/2021	Triphenylphosphate (surr.)	72	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	130	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	159	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.3	29/10/2021	13C5-PFPeA (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.3	29/10/2021	Dibutylchlorendate (surr.)	59	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP267_0.3	29/10/2021	Toluene-d8 (surr.)	61	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	53	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	121	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	197	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.1	29/10/2021	13C2-6:2 FTSA (surr.)	136	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.1	29/10/2021	13C2-8:2 FTSA (surr.)	132	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.1	29/10/2021	13C3-PFBS (surr.)	138	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.1	29/10/2021	13C6-PFDA (surr.)	134	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	127	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	152	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.3	29/10/2021	Toluene-d8 (surr.)	69	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP268_0.3	29/10/2021	D3-N-MeFOSA (surr.)	136	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	137	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	162	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.1	29/10/2021	13C2-8:2 FTSA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.1	29/10/2021	13C3-PFBS (surr.)	145	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.1	29/10/2021	13C5-PFPeA (surr.)	140	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.1	29/10/2021	13C6-PFDA (surr.)	134	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.1	29/10/2021	Toluene-d8 (surr.)	66	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.1	29/10/2021	D3-N-MeFOSAA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	133	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	159	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.3	29/10/2021	13C2-6:2 FTSA (surr.)	165	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.3	29/10/2021	13C3-PFBS (surr.)	139	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.3	29/10/2021	13C5-PFPeA (surr.)	138	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.3	29/10/2021	13C6-PFDA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.3	29/10/2021	Toluene-d8 (surr.)	73	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.3	29/10/2021	4-Bromofluorobenzene (surr.)	68	%	50	150	
05 Nov 2021	838532	Normal	SOIL	AI_TP269_0.3	29/10/2021	D3-N-MeFOSA (surr.)	147	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	138	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	145	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.1	29/10/2021	13C2-6:2 FTSA (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.1	29/10/2021	13C3-PFBS (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.1	29/10/2021	13C5-PFPeA (surr.)	138	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.1	29/10/2021	13C6-PFDA (surr.)	132	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.1	29/10/2021	Toluene-d8 (surr.)	67	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.1	29/10/2021	D3-N-MeFOSA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	134	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.3	29/10/2021	13C3-PFBS (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.3	29/10/2021	13C5-PFPeA (surr.)	137	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.3	29/10/2021	13C6-PFDA (surr.)	140	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP270_0.3	29/10/2021	D3-N-MeFOSA (surr.)	136	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	Phenol-d6 (surr.)	69	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	125	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	13C2-8:2 FTSA (surr.)	153	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	13C2-PFTeDA (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	13C3-PFBS (surr.)	134	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	13C5-PFPeA (surr.)	140	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	13C6-PFDA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	13C8-PFOS (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	Toluene-d8 (surr.)	71	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.1	29/10/2021	D3-N-MeFOSAA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	Phenol-d6 (surr.)	59	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	133	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	154	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C2-8:2 FTSA (surr.)	173	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C2-PFDoDA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C2-PFUnDA (surr.)	135	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C2-PFTeDA (surr.)	145	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C3-PFBS (surr.)	139	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C4-PFHpA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C5-PFHxA (surr.)	133	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C5-PFNA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C5-PFPeA (surr.)	147	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C8-PFOA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	13C8-PFOS (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	18O2-PFHxS (surr.)	135	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	Toluene-d8 (surr.)	61	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	2-Fluorobiphenyl (surr.)	127	%	30	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	Nitrobenzene-d5 (surr.)	132	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP271_0.3	29/10/2021	D3-N-MeFOSAA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	Phenol-d6 (surr.)	68	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	154	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	136	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C2-6:2 FTSA (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C2-8:2 FTSA (surr.)	164	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C2-PFDoDA (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C2-PFTeDA (surr.)	141	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C3-PFBS (surr.)	137	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C5-PFHxA (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C5-PFNA (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C5-PFPeA (surr.)	141	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C8-PFOA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	13C8-PFOS (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	18O2-PFHxS (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	D5-N-EtFOSAA (surr.)	135	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	D3-N-MeFOSAA (surr.)	142	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.1	29/10/2021	D5-N-EtFOSA (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	125	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C2-8:2 FTSA (surr.)	147	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C2-PFDoDA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C2-PFUnDA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C2-PFTeDA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C3-PFBS (surr.)	134	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C4-PFHpA (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C5-PFHxA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C5-PFPeA (surr.)	140	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C6-PFDA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C8-PFOA (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	13C8-PFOS (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP272_0.3	29/10/2021	D5-N-EtFOSA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	67	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	133	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	13C2-8:2 FTSA (surr.)	148	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	13C2-PFUnDA (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	13C3-PFBS (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	13C5-PFPeA (surr.)	135	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	13C8-PFOA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	18O2-PFHxS (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.1	29/10/2021	Tetrachloro-m-xylene (surr.)	134	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.3	29/10/2021	Phenol-d6 (surr.)	66	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	126	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.3	29/10/2021	13C2-8:2 FTSA (surr.)	146	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.3	29/10/2021	13C2-PFUnDA (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.3	29/10/2021	13C3-PFBS (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.3	29/10/2021	13C5-PFPeA (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.3	29/10/2021	13C8-PFOS (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.3	29/10/2021	Dibutylchlorendate (surr.)	67	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP265_0.3	29/10/2021	4-Bromofluorobenzene (surr.)	135	%	50	150	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	142	%	0	0	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	142	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C2-6:2 FTSA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C2-8:2 FTSA (surr.)	163	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C2-PFDoDA (surr.)	139	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C2-PFUnDA (surr.)	133	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C2-PFTeDA (surr.)	138	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C3-PFBS (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C4-PFHpA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C5-PFHxA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C5-PFNA (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C5-PFPeA (surr.)	145	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C8-PFOA (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	13C8-PFOS (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	Dibutylchlorendate (surr.)	73	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	18O2-PFHxS (surr.)	133	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	Toluene-d8 (surr.)	73	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	D5-N-EtFOSAA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.1	29/10/2021	D3-N-MeFOSAA (surr.)	134	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	131	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C2-8:2 FTSA (surr.)	150	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C2-PFUnDA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C3-PFBS (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C4-PFHpA (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C5-PFHxA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C5-PFNA (surr.)	132	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C5-PFPeA (surr.)	144	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C6-PFDA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C8-PFOA (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	13C8-PFOS (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP264_0.3	29/10/2021	Dibutylchlorendate (surr.)	74	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.1	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.1	29/10/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.1	29/10/2021	13C2-10:2 FTSA (surr.)	141	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.1	29/10/2021	13C2-4:2 FTSA (surr.)	172	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.1	29/10/2021	13C3-PFBS (surr.)	146	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.1	29/10/2021	13C6-PFDA (surr.)	136	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	Phenol-d6 (surr.)	51	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C2-10:2 FTSA (surr.)	129	%	0	0	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C2-4:2 FTSA (surr.)	133	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C2-8:2 FTSA (surr.)	149	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C2-PFDoDA (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C2-PFUnDA (surr.)	129	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C2-PFTeDA (surr.)	131	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C3-PFBS (surr.)	136	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C4-PFHpA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C5-PFHxA (surr.)	126	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C5-PFNA (surr.)	130	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C5-PFPeA (surr.)	146	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C6-PFDA (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	13C8-PFOS (surr.)	127	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	18O2-PFHxS (surr.)	128	%	20	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	Toluene-d8 (surr.)	63	%	70	130	
05 Nov 2021	838532	Normal	SOIL	AI_TP263_0.3	29/10/2021	Nitrobenzene-d5 (surr.)	126	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP141_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	70	%	0	0	
05 Nov 2021	838533	Normal	SOIL	AI_TP141_0.1	1/11/2021	13C2-PFUnDA (surr.)	142	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP141_0.1	1/11/2021	13C6-PFDA (surr.)	136	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP141_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	128	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP141_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	65	%	0	0	
05 Nov 2021	838533	Normal	SOIL	AI_TP141_0.3	1/11/2021	13C2-PFUnDA (surr.)	145	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP141_0.3	1/11/2021	13C6-PFDA (surr.)	144	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP141_0.3	1/11/2021	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP141_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	51	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP141_0.3	1/11/2021	D3-N-MeFOSAA (surr.)	135	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.1	1/11/2021	Phenol-d6 (surr.)	74	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.1	1/11/2021	13C2-PFUnDA (surr.)	138	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.1	1/11/2021	13C5-PFNA (surr.)	130	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.1	1/11/2021	Dibutylchlorendate (surr.)	69	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.1	1/11/2021	2-Fluorobiphenyl (surr.)	68	%	30	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.1	1/11/2021	Nitrobenzene-d5 (surr.)	63	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.1	1/11/2021	Tetrachloro-m-xylene (surr.)	72	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	130	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	54	%	0	0	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.3	1/11/2021	13C2-PFUnDA (surr.)	156	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.3	1/11/2021	13C6-PFDA (surr.)	133	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP137_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	64	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	56	%	0	0	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.1	1/11/2021	13C2-PFUnDA (surr.)	139	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.1	1/11/2021	13C6-PFDA (surr.)	139	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.1	1/11/2021	Tetrachloro-m-xylene (surr.)	74	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.3	1/11/2021	Phenol-d6 (surr.)	74	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.3	1/11/2021	13C2-4:2 FTSA (surr.)	74	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.3	1/11/2021	13C2-PFUnDA (surr.)	137	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.3	1/11/2021	13C6-PFDA (surr.)	150	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.3	1/11/2021	Dibutylchlorendate (surr.)	73	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.3	1/11/2021	Toluene-d8 (surr.)	67	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.3	1/11/2021	2-Fluorobiphenyl (surr.)	73	%	30	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.3	1/11/2021	Tetrachloro-m-xylene (surr.)	72	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP138_0.3	1/11/2021	D3-N-MeFOSAA (surr.)	138	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	52	%	0	0	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.1	1/11/2021	13C2-PFUnDA (surr.)	147	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.1	1/11/2021	13C5-PFNA (surr.)	132	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.1	1/11/2021	13C6-PFDA (surr.)	133	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	133	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	54	%	0	0	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.3	1/11/2021	Phenol-d6 (surr.)	72	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.3	1/11/2021	13C2-PFUnDA (surr.)	146	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.3	1/11/2021	13C6-PFDA (surr.)	136	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.3	1/11/2021	Toluene-d8 (surr.)	66	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.3	1/11/2021	2-Fluorobiphenyl (surr.)	62	%	30	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	60	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP139_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	63	%	50	150	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	52	%	0	0	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.1	1/11/2021	Phenol-d6 (surr.)	73	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.1	1/11/2021	13C2-PFUnDA (surr.)	130	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.1	1/11/2021	13C6-PFDA (surr.)	134	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.1	1/11/2021	Toluene-d8 (surr.)	62	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	131	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	53	%	0	0	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.3	1/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.3	1/11/2021	13C6-PFDA (surr.)	149	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.3	1/11/2021	2-Fluorobiphenyl (surr.)	74	%	30	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP140_0.3	1/11/2021	D3-N-MeFOSAA (surr.)	145	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.1	1/11/2021	13C2-PFUnDA (surr.)	129	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.1	1/11/2021	13C6-PFDA (surr.)	133	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.1	1/11/2021	Toluene-d8 (surr.)	53	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.1	1/11/2021	4-Bromofluorobenzene (surr.)	52	%	50	150	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	126	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.3	1/11/2021	13C2-8:2 FTSA (surr.)	128	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.3	1/11/2021	13C2-PFUnDA (surr.)	155	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.3	1/11/2021	13C5-PFNA (surr.)	134	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.3	1/11/2021	13C6-PFDA (surr.)	143	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.3	1/11/2021	18O2-PFHxS (surr.)	128	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.3	1/11/2021	Toluene-d8 (surr.)	62	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	73	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP136_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	57	%	50	150	
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.1	1/11/2021	Phenol-d6 (surr.)	74	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.1	1/11/2021	13C2-PFUnDA (surr.)	136	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.1	1/11/2021	13C6-PFDA (surr.)	127	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.3	1/11/2021	Phenol-d6 (surr.)	72	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.3	1/11/2021	13C2-PFUnDA (surr.)	136	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.3	1/11/2021	13C6-PFDA (surr.)	132	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.3	1/11/2021	18O2-PFHxS (surr.)	127	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.3	1/11/2021	2-Fluorobiphenyl (surr.)	71	%	30	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	72	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP135_0.3	1/11/2021	D3-N-MeFOSAA (surr.)	131	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.1	1/11/2021	13C2-PFUnDA (surr.)	137	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.1	1/11/2021	D5-N-EtFOSAA (surr.)	71	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	127	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.3	1/11/2021	Phenol-d6 (surr.)	65	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.3	1/11/2021	13C2-6:2 FTSA (surr.)	69	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.3	1/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.3	1/11/2021	13C6-PFDA (surr.)	136	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.3	1/11/2021	Toluene-d8 (surr.)	56	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	69	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	71	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP134_0.3	1/11/2021	Tetrachloro-m-xylene (surr.)	69	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.1	1/11/2021	Phenol-d6 (surr.)	65	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.1	1/11/2021	13C2-PFDoDA (surr.)	131	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.1	1/11/2021	13C2-PFUnDA (surr.)	135	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.1	1/11/2021	13C2-PFTeDA (surr.)	67	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.1	1/11/2021	13C5-PFNA (surr.)	136	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.1	1/11/2021	13C6-PFDA (surr.)	140	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.1	1/11/2021	D5-N-EtFOSAA (surr.)	55	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.1	1/11/2021	Nitrobenzene-d5 (surr.)	71	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.1	1/11/2021	Tetrachloro-m-xylene (surr.)	74	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.3	1/11/2021	Phenol-d6 (surr.)	70	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.3	1/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.3	1/11/2021	13C2-PFUnDA (surr.)	146	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.3	1/11/2021	13C6-PFDA (surr.)	145	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.3	1/11/2021	Toluene-d8 (surr.)	63	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	69	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	<1	%	50	150	
05 Nov 2021	838533	Normal	SOIL	AI_TP133_0.3	1/11/2021	Tetrachloro-m-xylene (surr.)	73	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.1	1/11/2021	Phenol-d6 (surr.)	72	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.1	1/11/2021	13C2-PFUnDA (surr.)	129	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.1	1/11/2021	13C5-PFNA (surr.)	126	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.1	1/11/2021	13C6-PFDA (surr.)	131	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.1	1/11/2021	Toluene-d8 (surr.)	58	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.1	1/11/2021	D5-N-EtFOSAA (surr.)	71	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.1	1/11/2021	Nitrobenzene-d5 (surr.)	70	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	56	%	0	0	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.3	1/11/2021	13C2-PFUnDA (surr.)	134	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.3	1/11/2021	13C6-PFDA (surr.)	134	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.3	1/11/2021	Toluene-d8 (surr.)	58	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	58	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	150	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP132_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.1	1/11/2021	Phenol-d6 (surr.)	53	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.1	1/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.1	1/11/2021	13C2-PFUnDA (surr.)	146	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.1	1/11/2021	13C5-PFNA (surr.)	133	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.1	1/11/2021	13C6-PFDA (surr.)	145	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.1	1/11/2021	Nitrobenzene-d5 (surr.)	70	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.1	1/11/2021	Tetrachloro-m-xylene (surr.)	71	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	135	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	Phenol-d6 (surr.)	63	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	13C2-8:2 FTSA (surr.)	128	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	13C2-PFDoDA (surr.)	126	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	13C2-PFUnDA (surr.)	142	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	13C5-PFNA (surr.)	128	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	13C6-PFDA (surr.)	138	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	18O2-PFHxS (surr.)	128	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	Toluene-d8 (surr.)	63	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	72	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP255_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	72	%	50	150	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.1	1/11/2021	Phenol-d6 (surr.)	57	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.1	1/11/2021	13C2-PFDoDA (surr.)	132	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.1	1/11/2021	13C2-PFUnDA (surr.)	129	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.1	1/11/2021	13C2-PFTeDA (surr.)	72	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.1	1/11/2021	13C6-PFDA (surr.)	131	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.3	1/11/2021	Phenol-d6 (surr.)	60	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.3	1/11/2021	13C2-PFDoDA (surr.)	131	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.3	1/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.3	1/11/2021	13C5-PFNA (surr.)	126	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.3	1/11/2021	13C6-PFDA (surr.)	153	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.3	1/11/2021	18O2-PFHxS (surr.)	127	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.3	1/11/2021	Toluene-d8 (surr.)	56	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	62	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP254_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.1	1/11/2021	Phenol-d6 (surr.)	53	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.1	1/11/2021	13C2-PFDoDA (surr.)	128	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.1	1/11/2021	13C2-PFUnDA (surr.)	142	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.1	1/11/2021	13C2-PFTeDA (surr.)	74	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.1	1/11/2021	13C6-PFDA (surr.)	137	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.1	1/11/2021	Dibutylchlorendate (surr.)	71	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.1	1/11/2021	18O2-PFHxS (surr.)	127	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.1	1/11/2021	Nitrobenzene-d5 (surr.)	65	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.1	1/11/2021	Tetrachloro-m-xylene (surr.)	68	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	Phenol-d6 (surr.)	53	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	13C2-PFUnDA (surr.)	132	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	13C5-PFNA (surr.)	129	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	13C6-PFDA (surr.)	130	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	Dibutylchlorendate (surr.)	73	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	Toluene-d8 (surr.)	67	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	69	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	67	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	Tetrachloro-m-xylene (surr.)	71	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP253_0.3	1/11/2021	D7-N-MeFOSE (surr.)	127	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.1	1/11/2021	Phenol-d6 (surr.)	56	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.1	1/11/2021	13C2-8:2 FTSA (surr.)	141	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.1	1/11/2021	13C2-PFDoDA (surr.)	142	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.1	1/11/2021	13C2-PFUnDA (surr.)	154	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.1	1/11/2021	13C2-PFTeDA (surr.)	72	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.1	1/11/2021	13C3-PFBS (surr.)	130	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.1	1/11/2021	13C6-PFDA (surr.)	139	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	133	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.3	1/11/2021	Phenol-d6 (surr.)	60	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.3	1/11/2021	13C2-6:2 FTSA (surr.)	71	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.3	1/11/2021	13C2-PFDoDA (surr.)	133	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.3	1/11/2021	13C2-PFUnDA (surr.)	126	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.3	1/11/2021	13C6-PFDA (surr.)	136	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP252_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	57	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.1	1/11/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.1	1/11/2021	13C2-PFDoDA (surr.)	133	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.1	1/11/2021	13C2-PFTeDA (surr.)	69	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.1	1/11/2021	Toluene-d8 (surr.)	51	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.1	1/11/2021	2-Fluorobiphenyl (surr.)	70	%	30	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.1	1/11/2021	Nitrobenzene-d5 (surr.)	59	%	70	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.1	1/11/2021	4-Bromofluorobenzene (surr.)	65	%	50	150	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	131	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.3	1/11/2021	Phenol-d6 (surr.)	57	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.3	1/11/2021	13C2-PFDoDA (surr.)	131	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.3	1/11/2021	13C2-PFUnDA (surr.)	145	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.3	1/11/2021	13C6-PFDA (surr.)	136	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	70	%	20	130	
05 Nov 2021	838533	Normal	SOIL	AI_TP244_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	74	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	13C2-PFUnDA (surr.)	137	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	13C2-PFTeDA (surr.)	72	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	13C5-PFNA (surr.)	126	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	13C6-PFDA (surr.)	138	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	Dibutylchlorendate (surr.)	62	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	Toluene-d8 (surr.)	73	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	137	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	98	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.3	1/11/2021	13C2-PFDoDA (surr.)	144	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.3	1/11/2021	13C2-PFUnDA (surr.)	150	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.3	1/11/2021	13C2-PFTeDA (surr.)	68	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.3	1/11/2021	13C5-PFNA (surr.)	128	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.3	1/11/2021	13C6-PFDA (surr.)	141	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.3	1/11/2021	Dibutylchlorendate (surr.)	60	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.3	1/11/2021	18O2-PFHxS (surr.)	129	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP245_0.3	1/11/2021	D3-N-MeFOSAA (surr.)	152	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	91	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.1	1/11/2021	13C2-PFDoDA (surr.)	146	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.1	1/11/2021	13C2-PFUnDA (surr.)	133	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.1	1/11/2021	13C6-PFDA (surr.)	136	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.1	1/11/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	144	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	101	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	13C2-PFTeDA (surr.)	72	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	13C3-PFBS (surr.)	135	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	13C6-PFDA (surr.)	131	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	p-Terphenyl-d14 (surr.)	147	%	30	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	Dibutylchlorendate (surr.)	133	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	64	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	143	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP246_0.3	1/11/2021	Tetrachloro-m-xylene (surr.)	143	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	111	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	13C2-8:2 FTSA (surr.)	127	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	13C2-PFDoDA (surr.)	143	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	13C2-PFUnDA (surr.)	128	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	13C4-PFHpA (surr.)	126	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	13C5-PFNA (surr.)	136	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	13C5-PFPeA (surr.)	127	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	13C6-PFDA (surr.)	135	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	p-Terphenyl-d14 (surr.)	71	%	30	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	Dibutylchlorendate (surr.)	59	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	18O2-PFHxS (surr.)	133	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	Toluene-d8 (surr.)	69	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	4-Bromofluorobenzene (surr.)	68	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	Tetrachloro-m-xylene (surr.)	69	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	142	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	57	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	104	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.3	1/11/2021	13C2-PFDoDA (surr.)	141	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.3	1/11/2021	13C2-PFUnDA (surr.)	130	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.3	1/11/2021	Dibutylchlorendate (surr.)	66	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP247_0.3	1/11/2021	D3-N-MeFOSAA (surr.)	127	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	120	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.1	1/11/2021	13C2-PFDoDA (surr.)	137	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.1	1/11/2021	13C2-PFUnDA (surr.)	146	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.1	1/11/2021	13C6-PFDA (surr.)	148	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	133	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.3	1/11/2021	13C2-6:2 FTSA (surr.)	68	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.3	1/11/2021	13C2-PFDoDA (surr.)	135	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.3	1/11/2021	13C2-PFUnDA (surr.)	136	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.3	1/11/2021	13C6-PFDA (surr.)	139	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.3	1/11/2021	Dibutylchlorendate (surr.)	63	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.3	1/11/2021	Toluene-d8 (surr.)	72	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	53	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP248_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	68	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	98	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.1	1/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.1	1/11/2021	13C2-PFUnDA (surr.)	134	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.1	1/11/2021	13C2-PFTeDA (surr.)	71	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.1	1/11/2021	13C5-PFNA (surr.)	127	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.1	1/11/2021	13C6-PFDA (surr.)	138	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.1	1/11/2021	Toluene-d8 (surr.)	69	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.1	1/11/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	134	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	103	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.3	1/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.3	1/11/2021	13C2-PFUnDA (surr.)	143	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.3	1/11/2021	13C3-PFBS (surr.)	126	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.3	1/11/2021	13C5-PFNA (surr.)	130	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.3	1/11/2021	13C6-PFDA (surr.)	136	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.3	1/11/2021	Dibutylchlorendate (surr.)	70	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	55	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP249_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	95	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.1	1/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.1	1/11/2021	13C2-PFUnDA (surr.)	135	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.1	1/11/2021	13C2-PFTeDA (surr.)	72	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.1	1/11/2021	13C3-PFBS (surr.)	139	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.1	1/11/2021	13C6-PFDA (surr.)	138	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.1	1/11/2021	Dibutylchlorendate (surr.)	62	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.1	1/11/2021	D5-N-EtFOSAA (surr.)	73	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	130	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	61	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.3	1/11/2021	13C2-PFDoDA (surr.)	147	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.3	1/11/2021	13C2-PFUnDA (surr.)	146	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.3	1/11/2021	13C6-PFDA (surr.)	144	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.3	1/11/2021	Dibutylchlorendate (surr.)	69	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP251_0.3	1/11/2021	D3-N-MeFOSAA (surr.)	140	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	107	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.1	1/11/2021	13C2-PFUnDA (surr.)	139	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.1	1/11/2021	Dibutylchlorendate (surr.)	71	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	129	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	67	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	13C2-4:2 FTSA (surr.)	58	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	13C2-6:2 FTSA (surr.)	73	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	13C2-PFDoDA (surr.)	126	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	13C2-PFUnDA (surr.)	134	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	13C2-PFTeDA (surr.)	74	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	13C5-PFNA (surr.)	128	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	13C6-PFDA (surr.)	137	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	Dibutylchlorendate (surr.)	69	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP250_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	62	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	60	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	101	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.1	1/11/2021	13C2-PFDoDA (surr.)	140	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.1	1/11/2021	13C2-PFUnDA (surr.)	133	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.1	1/11/2021	13C5-PFNA (surr.)	127	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.1	1/11/2021	13C6-PFDA (surr.)	129	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.1	1/11/2021	Dibutylchlorendate (surr.)	72	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	148	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	117	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	13C2-8:2 FTSA (surr.)	144	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	13C2-PFDoDA (surr.)	153	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	13C2-PFUnDA (surr.)	159	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	13C3-PFBS (surr.)	136	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	13C5-PFNA (surr.)	145	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	13C5-PFPeA (surr.)	130	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	13C6-PFDA (surr.)	158	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	Dibutylchlorendate (surr.)	61	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP235_0.3	1/11/2021	18O2-PFHxS (surr.)	139	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	54	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	109	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.1	1/11/2021	13C2-8:2 FTSA (surr.)	131	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.1	1/11/2021	13C2-PFDoDA (surr.)	138	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.1	1/11/2021	13C2-PFUnDA (surr.)	138	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.1	1/11/2021	13C5-PFNA (surr.)	126	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.1	1/11/2021	13C6-PFDA (surr.)	133	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.1	1/11/2021	Dibutylchlorendate (surr.)	70	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.1	1/11/2021	D3-N-MeFOSAA (surr.)	131	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	106	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.3	1/11/2021	13C2-PFDoDA (surr.)	130	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.3	1/11/2021	13C2-PFUnDA (surr.)	141	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.3	1/11/2021	13C6-PFDA (surr.)	146	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.3	1/11/2021	Dibutylchlorendate (surr.)	68	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.3	1/11/2021	18O2-PFHxS (surr.)	129	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP236_0.3	1/11/2021	D3-N-MeFOSAA (surr.)	138	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	113	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.1	1/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.1	1/11/2021	13C2-PFUnDA (surr.)	128	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.1	1/11/2021	13C5-PFNA (surr.)	134	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.1	1/11/2021	Dibutylchlorendate (surr.)	62	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.1	1/11/2021	Toluene-d8 (surr.)	66	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.1	1/11/2021	D5-N-EtFOSAA (surr.)	149	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.1	1/11/2021	4-Bromofluorobenzene (surr.)	64	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.1	1/11/2021	D3-N-MeFOSA (surr.)	73	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	128	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.3	1/11/2021	13C2-PFDoDA (surr.)	143	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.3	1/11/2021	13C2-PFUnDA (surr.)	155	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.3	1/11/2021	13C3-PFBS (surr.)	146	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.3	1/11/2021	13C5-PFNA (surr.)	140	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.3	1/11/2021	13C6-PFDA (surr.)	141	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.3	1/11/2021	Dibutylchlorendate (surr.)	67	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.3	1/11/2021	Toluene-d8 (surr.)	52	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP237_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	141	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	57	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	113	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.1	1/11/2021	13C2-PFDoDA (surr.)	127	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.1	1/11/2021	13C2-PFUnDA (surr.)	134	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.1	1/11/2021	13C3-PFBS (surr.)	127	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.1	1/11/2021	13C5-PFNA (surr.)	126	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.1	1/11/2021	Dibutylchlorendate (surr.)	66	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.1	1/11/2021	Toluene-d8 (surr.)	71	%	70	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.1	1/11/2021	D5-N-EtFOSAA (surr.)	146	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	111	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.3	1/11/2021	13C2-6:2 FTSA (surr.)	130	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.3	1/11/2021	13C2-PFDoDA (surr.)	137	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.3	1/11/2021	13C2-PFUnDA (surr.)	143	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.3	1/11/2021	13C3-PFBS (surr.)	128	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.3	1/11/2021	13C5-PFNA (surr.)	138	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.3	1/11/2021	Dibutylchlorendate (surr.)	63	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	71	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP238_0.3	1/11/2021	D3-N-MeFOSAA (surr.)	68	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	115	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.1	1/11/2021	13C2-PFDoDA (surr.)	131	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.1	1/11/2021	13C5-PFNA (surr.)	126	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.1	1/11/2021	Dibutylchlorendate (surr.)	69	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.1	1/11/2021	D5-N-EtFOSAA (surr.)	145	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	135	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.3	1/11/2021	13C2-6:2 FTSA (surr.)	130	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.3	1/11/2021	13C2-PFDoDA (surr.)	140	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.3	1/11/2021	13C2-PFUnDA (surr.)	132	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.3	1/11/2021	13C5-PFNA (surr.)	146	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.3	1/11/2021	13C5-PFPeA (surr.)	135	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.3	1/11/2021	Dibutylchlorendate (surr.)	64	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	143	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP239_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	149	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	122	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	13C2-PFDoDA (surr.)	148	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	13C2-PFUnDA (surr.)	138	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	13C3-PFBS (surr.)	134	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	13C4-PFHpA (surr.)	128	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	13C5-PFNA (surr.)	145	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	13C5-PFPeA (surr.)	128	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	13C6-PFDA (surr.)	128	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	13C8-PFOA (surr.)	135	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.1	1/11/2021	D5-N-EtFOSAA (surr.)	152	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	Triphenylphosphate (surr.)	70	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	Phenol-d6 (surr.)	64	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	115	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	13C2-PFDoDA (surr.)	145	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	13C2-PFUnDA (surr.)	141	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	13C3-PFBS (surr.)	134	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	13C5-PFNA (surr.)	138	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	p-Terphenyl-d14 (surr.)	66	%	30	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	Dibutylchlorendate (surr.)	-999	%	70	130	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	Toluene-d8 (surr.)	57	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	2-Fluorobiphenyl (surr.)	70	%	30	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	D5-N-EtFOSAA (surr.)	152	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	Nitrobenzene-d5 (surr.)	73	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	52	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP240_0.3	1/11/2021	Tetrachloro-m-xylene (surr.)	61	%	70	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D01	1/11/2021	2.4.6-Tribromophenol (surr.)	64	%	0	0	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D01	1/11/2021	Phenol-d6 (surr.)	72	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D01	1/11/2021	13C2-10:2 FTSA (surr.)	116	%	0	0	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D01	1/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D01	1/11/2021	13C2-PFUnDA (surr.)	135	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D01	1/11/2021	13C5-PFNA (surr.)	137	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D01	1/11/2021	Dibutylchlorendate (surr.)	69	%	70	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D01	1/11/2021	D5-N-EtFOSAA (surr.)	145	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D01	1/11/2021	4-Bromofluorobenzene (surr.)	150	%	50	150	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D02	1/11/2021	13C2-10:2 FTSA (surr.)	95	%	0	0	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D02	1/11/2021	13C2-4:2 FTSA (surr.)	135	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D02	1/11/2021	13C2-6:2 FTSA (surr.)	142	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D02	1/11/2021	13C2-8:2 FTSA (surr.)	151	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D02	1/11/2021	13C2-PFTeDA (surr.)	136	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D02	1/11/2021	13C3-PFBS (surr.)	130	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D02	1/11/2021	D3-N-MeFOSAA (surr.)	130	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D02	1/11/2021	D3-N-MeFOSA (surr.)	132	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D03	1/11/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D03	1/11/2021	13C2-4:2 FTSA (surr.)	138	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D03	1/11/2021	13C2-8:2 FTSA (surr.)	169	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D03	1/11/2021	13C2-PFTeDA (surr.)	132	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D03	1/11/2021	D5-N-EtFOSAA (surr.)	148	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D03	1/11/2021	D3-N-MeFOSAA (surr.)	150	%	20	130	
05 Nov 2021	838534	Field_D	SOIL	AI_20211101_D03	1/11/2021	D3-N-MeFOSA (surr.)	134	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	87	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	Phenol-d6 (surr.)	133	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	13C2-PFDoDA (surr.)	136	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	13C2-PFUnDA (surr.)	143	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	13C3-PFBS (surr.)	128	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	13C6-PFDA (surr.)	142	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	13C8-PFOS (surr.)	127	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	D5-N-EtFOSAA (surr.)	73	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	Tetrachloro-m-xylene (surr.)	73	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.1	2/11/2021	D3-N-MeFOSAA (surr.)	134	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	89	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.3	2/11/2021	13C2-PFDoDA (surr.)	140	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.3	2/11/2021	13C2-PFUnDA (surr.)	152	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.3	2/11/2021	13C3-PFBS (surr.)	128	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.3	2/11/2021	13C5-PFPeA (surr.)	126	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.3	2/11/2021	13C6-PFDA (surr.)	147	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.3	2/11/2021	18O2-PFHxS (surr.)	131	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.3	2/11/2021	D5-N-EtFOSAA (surr.)	64	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP217_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
05 Nov 2021	838535	Normal	SOIL	AI_TP218_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP218_0.1	2/11/2021	13C2-PFDoDA (surr.)	127	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP218_0.1	2/11/2021	13C2-PFUnDA (surr.)	128	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP218_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	62	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP218_0.3	2/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP218_0.3	2/11/2021	13C2-PFUnDA (surr.)	155	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP218_0.3	2/11/2021	13C6-PFDA (surr.)	149	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP218_0.3	2/11/2021	Dibutylchlorendate (surr.)	73	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP218_0.3	2/11/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.1	2/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.1	2/11/2021	13C2-PFUnDA (surr.)	141	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.1	2/11/2021	13C2-PFTeDA (surr.)	126	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.1	2/11/2021	13C6-PFDA (surr.)	144	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.1	2/11/2021	18O2-PFHxS (surr.)	126	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.1	2/11/2021	D3-N-MeFOSAA (surr.)	147	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	64	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.3	2/11/2021	13C2-PFUnDA (surr.)	136	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.3	2/11/2021	13C6-PFDA (surr.)	144	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.3	2/11/2021	Nitrobenzene-d5 (surr.)	137	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP219_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	130	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP220_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	54	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP220_0.1	2/11/2021	13C2-PFUnDA (surr.)	148	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP220_0.1	2/11/2021	13C6-PFDA (surr.)	157	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP220_0.1	2/11/2021	13C8-PFOS (surr.)	127	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP220_0.1	2/11/2021	D3-N-MeFOSAA (surr.)	147	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP220_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	56	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP220_0.3	2/11/2021	Phenol-d6 (surr.)	60	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP220_0.3	2/11/2021	13C2-PFUnDA (surr.)	136	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP220_0.3	2/11/2021	D5-N-EtFOSAA (surr.)	57	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	66	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.1	2/11/2021	13C2-PFUnDA (surr.)	147	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.1	2/11/2021	13C6-PFDA (surr.)	129	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.1	2/11/2021	D3-N-MeFOSAA (surr.)	131	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	69	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.3	2/11/2021	13C2-8:2 FTSA (surr.)	128	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.3	2/11/2021	13C2-PFUnDA (surr.)	143	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.3	2/11/2021	13C2-PFTeDA (surr.)	139	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.3	2/11/2021	13C5-PFNA (surr.)	128	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.3	2/11/2021	13C6-PFDA (surr.)	155	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP221_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	134	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP222_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP222_0.1	2/11/2021	13C2-PFUnDA (surr.)	146	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP222_0.1	2/11/2021	13C6-PFDA (surr.)	139	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP222_0.1	2/11/2021	D3-N-MeFOSAA (surr.)	144	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP222_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP222_0.3	2/11/2021	13C2-PFUnDA (surr.)	135	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP222_0.3	2/11/2021	13C6-PFDA (surr.)	130	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP222_0.3	2/11/2021	D5-N-EtFOSAA (surr.)	55	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.1	2/11/2021	Phenol-d6 (surr.)	51	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.1	2/11/2021	13C2-PFUnDA (surr.)	148	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.1	2/11/2021	13C2-PFTeDA (surr.)	133	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.1	2/11/2021	13C5-PFNA (surr.)	128	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.1	2/11/2021	Nitrobenzene-d5 (surr.)	129	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.1	2/11/2021	D3-N-MeFOSAA (surr.)	140	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.3	2/11/2021	Phenol-d6 (surr.)	61	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.3	2/11/2021	13C2-6:2 FTSA (surr.)	270	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.3	2/11/2021	13C2-PFUnDA (surr.)	147	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.3	2/11/2021	13C6-PFDA (surr.)	144	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP223_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	142	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.1	2/11/2021	Phenol-d6 (surr.)	61	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.1	2/11/2021	13C2-PFUnDA (surr.)	155	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.1	2/11/2021	13C5-PFNA (surr.)	128	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.1	2/11/2021	13C6-PFDA (surr.)	133	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.1	2/11/2021	D5-N-EtFOSAA (surr.)	59	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	52	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.3	2/11/2021	13C2-PFUnDA (surr.)	137	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.3	2/11/2021	13C6-PFDA (surr.)	132	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.3	2/11/2021	D5-N-EtFOSAA (surr.)	32	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.3	2/11/2021	Nitrobenzene-d5 (surr.)	126	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP213_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	51	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.1	2/11/2021	Phenol-d6 (surr.)	126	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.1	2/11/2021	13C2-PFUnDA (surr.)	154	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.1	2/11/2021	13C5-PFNA (surr.)	126	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.1	2/11/2021	13C6-PFDA (surr.)	144	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.1	2/11/2021	Nitrobenzene-d5 (surr.)	129	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.1	2/11/2021	D3-N-MeFOSAA (surr.)	143	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.3	2/11/2021	13C2-4:2 FTSA (surr.)	70	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.3	2/11/2021	13C2-PFUnDA (surr.)	144	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.3	2/11/2021	Toluene-d8 (surr.)	65	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.3	2/11/2021	D5-N-EtFOSAA (surr.)	44	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	69	%	50	150	
05 Nov 2021	838535	Normal	SOIL	AI_TP212_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	68	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP211_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP211_0.1	2/11/2021	13C2-PFUnDA (surr.)	134	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP211_0.1	2/11/2021	13C6-PFDA (surr.)	145	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP211_0.1	2/11/2021	D3-N-MeFOSAA (surr.)	155	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP211_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP211_0.3	2/11/2021	13C2-4:2 FTSA (surr.)	74	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP211_0.3	2/11/2021	13C2-PFUnDA (surr.)	151	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP211_0.3	2/11/2021	13C6-PFDA (surr.)	133	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.1	2/11/2021	13C2-10:2 FTSA (surr.)	127	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.1	2/11/2021	13C2-PFDoDA (surr.)	137	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.1	2/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.1	2/11/2021	13C3-PFBS (surr.)	126	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.1	2/11/2021	13C5-PFNA (surr.)	152	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.1	2/11/2021	D5-N-EtFOSAA (surr.)	151	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	86	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.3	2/11/2021	13C2-PFDoDA (surr.)	131	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.3	2/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.3	2/11/2021	13C3-PFBS (surr.)	128	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.3	2/11/2021	13C5-PFNA (surr.)	147	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP210_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	72	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP209_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP209_0.1	2/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP209_0.1	2/11/2021	13C2-PFUnDA (surr.)	147	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP209_0.1	2/11/2021	13C5-PFNA (surr.)	129	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP209_0.1	2/11/2021	D5-N-EtFOSAA (surr.)	142	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP209_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	56	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP209_0.3	2/11/2021	13C2-4:2 FTSA (surr.)	73	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP209_0.3	2/11/2021	13C2-PFDoDA (surr.)	140	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP209_0.3	2/11/2021	13C2-PFUnDA (surr.)	129	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP209_0.3	2/11/2021	13C5-PFNA (surr.)	130	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP208_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838535	Normal	SOIL	AI_TP208_0.1	2/11/2021	13C2-6:2 FTSA (surr.)	126	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP208_0.1	2/11/2021	13C2-PFDoDA (surr.)	130	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP208_0.1	2/11/2021	13C3-PFBS (surr.)	126	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP208_0.1	2/11/2021	D5-N-EtFOSAA (surr.)	130	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP208_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	53	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP208_0.3	2/11/2021	D5-N-EtFOSAA (surr.)	62	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP208_0.3	2/11/2021	Tetrachloro-m-xylene (surr.)	74	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP208_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	61	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP204_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	68	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP204_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	59	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP204_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	111	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	13C2-10:2 FTSA (surr.)	-999	%	0	0	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	13C2-6:2 FTSA (surr.)	150	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	13C2-PFUnDA (surr.)	134	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	13C2-PFTeDA (surr.)	135	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	13C3-PFBS (surr.)	155	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	13C4-PFHpA (surr.)	140	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	13C5-PFHxA (surr.)	128	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	13C6-PFDA (surr.)	129	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	13C8-PFOS (surr.)	141	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	p-Terphenyl-d14 (surr.)	137	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	18O2-PFHxS (surr.)	146	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	Toluene-d8 (surr.)	74	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	2-Fluorobiphenyl (surr.)	131	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	Nitrobenzene-d5 (surr.)	144	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	D3-N-MeFOSA (surr.)	57	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	D5-N-EtFOSA (surr.)	51	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	D7-N-MeFOSE (surr.)	31	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.1	2/11/2021	D9-N-EtFOSE (surr.)	28	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	135	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	Phenol-d6 (surr.)	138	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	13C2-10:2 FTSA (surr.)	142	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	13C2-4:2 FTSA (surr.)	59	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	13C2-6:2 FTSA (surr.)	128	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	13C2-8:2 FTSA (surr.)	69	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	13C2-PFTeDA (surr.)	130	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	13C3-PFBS (surr.)	140	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	13C4-PFBA (surr.)	64	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	13C8-PFOS (surr.)	131	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	p-Terphenyl-d14 (surr.)	147	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	18O2-PFHxS (surr.)	135	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	2-Fluorobiphenyl (surr.)	137	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	50	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	64	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	D3-N-MeFOSA (surr.)	71	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	D5-N-EtFOSA (surr.)	60	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	D7-N-MeFOSE (surr.)	34	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP203_0.3	2/11/2021	D9-N-EtFOSE (surr.)	39	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	119	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	Phenol-d6 (surr.)	131	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	13C2-10:2 FTSA (surr.)	-999	%	0	0	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	13C2-PFTeDA (surr.)	133	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	13C3-PFBS (surr.)	146	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	13C4-PFBA (surr.)	70	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	13C8-PFOS (surr.)	131	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	p-Terphenyl-d14 (surr.)	143	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	18O2-PFHxS (surr.)	144	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	2-Fluorobiphenyl (surr.)	140	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	D3-N-MeFOSA (surr.)	69	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	D5-N-EtFOSA (surr.)	50	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	D7-N-MeFOSE (surr.)	44	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.1	2/11/2021	D9-N-EtFOSE (surr.)	43	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	131	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	Phenol-d6 (surr.)	130	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	13C2-10:2 FTSA (surr.)	156	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	13C2-PFTeDA (surr.)	133	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	13C3-PFBS (surr.)	133	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	13C4-PFBA (surr.)	68	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	13C8-PFOS (surr.)	131	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	18O2-PFHxS (surr.)	142	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	Toluene-d8 (surr.)	74	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	2-Fluorobiphenyl (surr.)	139	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	64	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	D3-N-MeFOSA (surr.)	74	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	D5-N-EtFOSA (surr.)	52	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	D7-N-MeFOSE (surr.)	50	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP202_0.3	2/11/2021	D9-N-EtFOSE (surr.)	44	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	125	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	Phenol-d6 (surr.)	132	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	13C2-10:2 FTSA (surr.)	199	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	13C3-PFBS (surr.)	149	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	13C6-PFDA (surr.)	128	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	13C8-PFOS (surr.)	130	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	p-Terphenyl-d14 (surr.)	144	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	18O2-PFHxS (surr.)	130	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	2-Fluorobiphenyl (surr.)	141	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	4-Bromofluorobenzene (surr.)	53	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	D5-N-EtFOSA (surr.)	59	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	D7-N-MeFOSE (surr.)	58	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.1	2/11/2021	D9-N-EtFOSE (surr.)	54	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	134	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	Phenol-d6 (surr.)	136	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	13C2-10:2 FTSA (surr.)	117	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	13C2-6:2 FTSA (surr.)	74	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	13C4-PFBA (surr.)	68	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	13C5-PFHxA (surr.)	126	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	13C8-PFOS (surr.)	134	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	p-Terphenyl-d14 (surr.)	142	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	18O2-PFHxS (surr.)	139	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	Toluene-d8 (surr.)	73	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	2-Fluorobiphenyl (surr.)	129	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	Nitrobenzene-d5 (surr.)	147	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	68	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	60	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	D5-N-EtFOSA (surr.)	74	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	D7-N-MeFOSE (surr.)	58	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP201_0.3	2/11/2021	D9-N-EtFOSE (surr.)	62	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	125	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	Phenol-d6 (surr.)	129	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	13C2-10:2 FTSA (surr.)	-999	%	0	0	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	13C2-4:2 FTSA (surr.)	148	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	13C3-PFBS (surr.)	170	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	13C4-PFHpA (surr.)	127	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	13C5-PFHxA (surr.)	126	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	13C6-PFDA (surr.)	137	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	13C8-PFOS (surr.)	137	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	p-Terphenyl-d14 (surr.)	143	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	18O2-PFHxS (surr.)	135	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	2-Fluorobiphenyl (surr.)	138	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	D3-N-MeFOSA (surr.)	74	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	D5-N-EtFOSA (surr.)	72	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	D7-N-MeFOSE (surr.)	58	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.1	2/11/2021	D9-N-EtFOSE (surr.)	54	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	141	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	Phenol-d6 (surr.)	140	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	13C2-10:2 FTSA (surr.)	158	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	13C2-PFTeDA (surr.)	128	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	13C3-PFBS (surr.)	140	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	13C4-PFBA (surr.)	73	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	13C8-PFOS (surr.)	133	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	p-Terphenyl-d14 (surr.)	144	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	18O2-PFHxS (surr.)	136	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	Toluene-d8 (surr.)	53	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	2-Fluorobiphenyl (surr.)	138	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	69	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	D7-N-MeFOSE (surr.)	67	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP200_0.3	2/11/2021	D9-N-EtFOSE (surr.)	66	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	114	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	13C2-10:2 FTSA (surr.)	-999	%	0	0	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	13C2-4:2 FTSA (surr.)	-999	%	20	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	13C2-6:2 FTSA (surr.)	162	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	13C2-8:2 FTSA (surr.)	131	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	13C2-PFUnDA (surr.)	136	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	13C3-PFBS (surr.)	150	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	13C4-PFHpA (surr.)	153	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	13C5-PFHxA (surr.)	148	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	13C6-PFDA (surr.)	134	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	13C8-PFOS (surr.)	136	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	p-Terphenyl-d14 (surr.)	144	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	18O2-PFHxS (surr.)	146	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	Toluene-d8 (surr.)	50	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	2-Fluorobiphenyl (surr.)	137	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	D5-N-EtFOSAA (surr.)	129	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	D5-N-EtFOSA (surr.)	67	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	D7-N-MeFOSE (surr.)	63	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.1	2/11/2021	D9-N-EtFOSE (surr.)	59	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	144	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	13C2-10:2 FTSA (surr.)	169	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	13C2-PFTeDA (surr.)	138	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	13C3-PFBS (surr.)	150	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	13C4-PFBA (surr.)	71	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	13C8-PFOS (surr.)	146	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	18O2-PFHxS (surr.)	141	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	Toluene-d8 (surr.)	67	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	53	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	70	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	D7-N-MeFOSE (surr.)	72	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP193_0.3	2/11/2021	D9-N-EtFOSE (surr.)	66	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	Triphenylphosphate (surr.)	126	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	133	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	Phenol-d6 (surr.)	147	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	13C2-10:2 FTSA (surr.)	183	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	13C2-4:2 FTSA (surr.)	136	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	13C2-6:2 FTSA (surr.)	142	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	13C2-PFTeDA (surr.)	129	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	13C3-PFBS (surr.)	163	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	13C4-PFHpA (surr.)	128	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	13C5-PFHxA (surr.)	135	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	13C8-PFOS (surr.)	139	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	Dibutylchlorendate (surr.)	127	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	18O2-PFHxS (surr.)	141	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	Toluene-d8 (surr.)	55	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	4-Bromofluorobenzene (surr.)	56	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	D5-N-EtFOSA (surr.)	68	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	D7-N-MeFOSE (surr.)	64	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.1	2/11/2021	D9-N-EtFOSE (surr.)	66	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	111	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	Phenol-d6 (surr.)	149	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	13C2-10:2 FTSA (surr.)	157	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	13C2-4:2 FTSA (surr.)	127	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	13C2-PFTeDA (surr.)	136	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	13C3-PFBS (surr.)	128	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	13C8-PFOS (surr.)	143	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	18O2-PFHxS (surr.)	143	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	Toluene-d8 (surr.)	69	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	2-Fluorobiphenyl (surr.)	147	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	D5-N-EtFOSAA (surr.)	64	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	71	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	62	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	D5-N-EtFOSA (surr.)	69	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	D7-N-MeFOSE (surr.)	63	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP194_0.3	2/11/2021	D9-N-EtFOSE (surr.)	64	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	66	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	Phenol-d6 (surr.)	136	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	13C2-10:2 FTSA (surr.)	-999	%	0	0	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	13C2-4:2 FTSA (surr.)	156	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	13C2-6:2 FTSA (surr.)	134	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	13C2-PFTeDA (surr.)	127	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	13C3-PFBS (surr.)	142	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	13C4-PFHpA (surr.)	139	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	13C5-PFHxA (surr.)	155	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	13C5-PFPeA (surr.)	127	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	13C6-PFDA (surr.)	144	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	13C8-PFOS (surr.)	144	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	18O2-PFHxS (surr.)	149	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	Toluene-d8 (surr.)	57	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	D3-N-MeFOSA (surr.)	68	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	D5-N-EtFOSA (surr.)	45	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	D7-N-MeFOSE (surr.)	59	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.1	2/11/2021	D9-N-EtFOSE (surr.)	57	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	52	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	Phenol-d6 (surr.)	143	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	13C2-10:2 FTSA (surr.)	152	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	13C3-PFBS (surr.)	148	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	13C8-PFOS (surr.)	141	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	18O2-PFHxS (surr.)	145	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	Toluene-d8 (surr.)	52	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	2-Fluorobiphenyl (surr.)	126	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	Nitrobenzene-d5 (surr.)	126	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	53	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	D3-N-MeFOSAA (surr.)	63	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP195_0.3	2/11/2021	D9-N-EtFOSE (surr.)	70	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	59	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	13C2-10:2 FTSA (surr.)	-999	%	0	0	INT
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	13C2-4:2 FTSA (surr.)	154	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	13C2-6:2 FTSA (surr.)	148	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	13C2-PFUnDA (surr.)	132	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	13C3-PFBS (surr.)	157	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	13C4-PFHpA (surr.)	128	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	13C5-PFHxA (surr.)	138	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	13C8-PFOS (surr.)	138	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	18O2-PFHxS (surr.)	146	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	Toluene-d8 (surr.)	65	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	D7-N-MeFOSE (surr.)	63	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.1	2/11/2021	D9-N-EtFOSE (surr.)	57	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	52	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	Phenol-d6 (surr.)	149	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	13C2-10:2 FTSA (surr.)	179	%	0	0	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	13C2-6:2 FTSA (surr.)	147	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	13C2-PFTeDA (surr.)	136	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	13C3-PFBS (surr.)	159	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	13C8-PFOS (surr.)	147	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	18O2-PFHxS (surr.)	150	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	2-Fluorobiphenyl (surr.)	128	%	30	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	Nitrobenzene-d5 (surr.)	135	%	70	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	D7-N-MeFOSE (surr.)	72	%	20	130	
05 Nov 2021	838536	Normal	SOIL	AI_TP196_0.3	2/11/2021	D9-N-EtFOSE (surr.)	66	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	Triphenylphosphate (surr.)	132	%	70	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	2.4.6-Tribromophenol (surr.)	58	%	0	0	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	13C2-10:2 FTSA (surr.)	162	%	0	0	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	13C2-PFTeDA (surr.)	138	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	13C3-PFBS (surr.)	158	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	13C5-PFHxA (surr.)	130	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	13C8-PFOS (surr.)	134	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	p-Terphenyl-d14 (surr.)	140	%	30	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	18O2-PFHxS (surr.)	148	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	2-Fluorobiphenyl (surr.)	144	%	30	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	Nitrobenzene-d5 (surr.)	149	%	70	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	Tetrachloro-m-xylene (surr.)	129	%	70	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	D3-N-MeFOSAA (surr.)	68	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D01	2/11/2021	D9-N-EtFOSE (surr.)	74	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D02	2/11/2021	13C2-10:2 FTSA (surr.)	123	%	0	0	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D02	2/11/2021	13C2-8:2 FTSA (surr.)	130	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D02	2/11/2021	13C2-PFDoDA (surr.)	130	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D02	2/11/2021	13C4-PFBA (surr.)	133	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D02	2/11/2021	13C4-PFHpA (surr.)	142	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D02	2/11/2021	13C5-PFNA (surr.)	143	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D02	2/11/2021	13C5-PFPeA (surr.)	141	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D02	2/11/2021	13C6-PFDA (surr.)	127	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D02	2/11/2021	D3-N-MeFOSAA (surr.)	68	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D02	2/11/2021	D3-N-MeFOSA (surr.)	139	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	2.4.6-Tribromophenol (surr.)	50	%	0	0	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	13C2-10:2 FTSA (surr.)	181	%	0	0	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	13C2-PFTeDA (surr.)	127	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	13C3-PFBS (surr.)	150	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	13C4-PFHpA (surr.)	135	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	13C5-PFHxA (surr.)	149	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	13C8-PFOS (surr.)	142	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	18O2-PFHxS (surr.)	138	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	4-Bromofluorobenzene (surr.)	139	%	50	150	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	D5-N-EtFOSA (surr.)	71	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	D7-N-MeFOSE (surr.)	68	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D03	2/11/2021	D9-N-EtFOSE (surr.)	67	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D04	2/11/2021	13C2-10:2 FTSA (surr.)	108	%	0	0	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D04	2/11/2021	13C2-PFDoDA (surr.)	137	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D04	2/11/2021	13C2-PFUnDA (surr.)	149	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D04	2/11/2021	13C4-PFBA (surr.)	130	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D04	2/11/2021	13C5-PFPeA (surr.)	138	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D04	2/11/2021	13C6-PFDA (surr.)	129	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D04	2/11/2021	D3-N-MeFOSAA (surr.)	69	%	20	130	
05 Nov 2021	838536	Field_D	SOIL	AI_20211102_D04	2/11/2021	D3-N-MeFOSA (surr.)	136	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.1	3/11/2021	Toluene-d8 (surr.)	70	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.3	3/11/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.3	3/11/2021	Phenol-d6 (surr.)	146	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	87	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.3	3/11/2021	p-Terphenyl-d14 (surr.)	132	%	30	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.3	3/11/2021	Toluene-d8 (surr.)	66	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.3	3/11/2021	2-Fluorobiphenyl (surr.)	148	%	30	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP234_0.3	3/11/2021	Nitrobenzene-d5 (surr.)	148	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP233_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP233_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	140	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP233_0.1	3/11/2021	13C2-4:2 FTSA (surr.)	140	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP233_0.1	3/11/2021	13C2-6:2 FTSA (surr.)	136	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP233_0.1	3/11/2021	13C2-8:2 FTSA (surr.)	167	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP233_0.1	3/11/2021	Dibutylchlorendate (surr.)	68	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP233_0.1	3/11/2021	D7-N-MeFOSE (surr.)	72	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP233_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP233_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP233_0.3	3/11/2021	Dibutylchlorendate (surr.)	74	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP232_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP232_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP232_0.1	3/11/2021	D7-N-MeFOSE (surr.)	74	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP232_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP232_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	101	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	87	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	Phenol-d6 (surr.)	131	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	174	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	13C2-4:2 FTSA (surr.)	62	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	13C2-6:2 FTSA (surr.)	56	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	13C3-PFBS (surr.)	139	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	13C4-PFBA (surr.)	67	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	13C8-PFOS (surr.)	147	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	18O2-PFHxS (surr.)	136	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	Toluene-d8 (surr.)	70	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	2-Fluorobiphenyl (surr.)	128	%	30	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	D5-N-EtFOSAA (surr.)	62	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	Nitrobenzene-d5 (surr.)	133	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	D3-N-MeFOSAA (surr.)	56	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP231_0.3	3/11/2021	D9-N-EtFOSE (surr.)	74	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	183	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	13C2-4:2 FTSA (surr.)	152	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	13C2-6:2 FTSA (surr.)	140	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	13C3-PFBS (surr.)	145	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	13C4-PFHpA (surr.)	128	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	13C5-PFHxA (surr.)	129	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	13C8-PFOS (surr.)	144	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	18O2-PFHxS (surr.)	136	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	D5-N-EtFOSA (surr.)	73	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.1	3/11/2021	D9-N-EtFOSE (surr.)	66	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	58	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	83	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.3	3/11/2021	Dibutylchlorendate (surr.)	65	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP230_0.3	3/11/2021	D3-N-MeFOSAA (surr.)	66	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP229_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP229_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	85	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP229_0.1	3/11/2021	13C8-PFOA (surr.)	128	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP229_0.1	3/11/2021	Toluene-d8 (surr.)	66	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP229_0.1	3/11/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
05 Nov 2021	838537	Normal	SOIL	AI_TP229_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP229_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP229_0.3	3/11/2021	13C8-PFOA (surr.)	126	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP229_0.3	3/11/2021	Dibutylchlorendate (surr.)	72	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP227_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP227_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	102	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP227_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP227_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	95	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP227_0.3	3/11/2021	Dibutylchlorendate (surr.)	70	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP227_0.3	3/11/2021	D5-N-EtFOSAA (surr.)	61	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP227_0.3	3/11/2021	D3-N-MeFOSAA (surr.)	48	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP226_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP226_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	101	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP226_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP226_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	103	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP226_0.3	3/11/2021	13C2-8:2 FTSA (surr.)	129	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP226_0.3	3/11/2021	Dibutylchlorendate (surr.)	73	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP226_0.3	3/11/2021	D3-N-MeFOSAA (surr.)	65	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP228_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP228_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	111	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP228_0.1	3/11/2021	13C8-PFOA (surr.)	132	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP228_0.1	3/11/2021	Dibutylchlorendate (surr.)	72	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP228_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	123	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP228_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	104	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP228_0.3	3/11/2021	Dibutylchlorendate (surr.)	63	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP228_0.3	3/11/2021	D3-N-MeFOSAA (surr.)	61	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	Triphenylphosphate (surr.)	60	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	68	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	Phenol-d6 (surr.)	57	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	173	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C2-4:2 FTSA (surr.)	135	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C2-8:2 FTSA (surr.)	182	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C2-PFDoDA (surr.)	137	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C2-PFUnDA (surr.)	139	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C2-PFTeDA (surr.)	145	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C3-PFBS (surr.)	130	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C5-PFNA (surr.)	127	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C5-PFPeA (surr.)	134	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C6-PFDA (surr.)	134	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C8-PFOA (surr.)	128	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	13C8-PFOS (surr.)	138	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	p-Terphenyl-d14 (surr.)	64	%	30	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	Dibutylchlorendate (surr.)	63	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	18O2-PFHxS (surr.)	127	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	2-Fluorobiphenyl (surr.)	61	%	30	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	D5-N-EtFOSAA (surr.)	146	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	Nitrobenzene-d5 (surr.)	68	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	Tetrachloro-m-xylene (surr.)	63	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.1	3/11/2021	D3-N-MeFOSAA (surr.)	146	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	72	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.3	3/11/2021	D5-N-EtFOSAA (surr.)	73	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP224_0.3	3/11/2021	4-Bromofluorobenzene (surr.)	59	%	50	150	
05 Nov 2021	838537	Normal	SOIL	AI_TP215_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	60	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP215_0.1	3/11/2021	Phenol-d6 (surr.)	69	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP215_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	126	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP215_0.1	3/11/2021	13C2-6:2 FTSA (surr.)	147	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP215_0.1	3/11/2021	13C2-8:2 FTSA (surr.)	133	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP215_0.1	3/11/2021	13C2-PFDoDA (surr.)	126	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP215_0.1	3/11/2021	13C2-PFTeDA (surr.)	133	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP215_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	100	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP215_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP215_0.3	3/11/2021	Toluene-d8 (surr.)	73	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP205_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	69	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP205_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	106	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP205_0.1	3/11/2021	13C8-PFOA (surr.)	134	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP205_0.1	3/11/2021	Dibutylchlorendate (surr.)	64	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP205_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	100	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP205_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	86	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP205_0.3	3/11/2021	Dibutylchlorendate (surr.)	69	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	106	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	102	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	Triphenylphosphate (surr.)	147	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	143	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	Phenol-d6 (surr.)	136	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	13C2-6:2 FTSA (surr.)	62	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	13C5-PFPeA (surr.)	140	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	13C6-PFDA (surr.)	131	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	p-Terphenyl-d14 (surr.)	132	%	30	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	18O2-PFHxS (surr.)	133	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	2-Fluorobiphenyl (surr.)	144	%	30	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP186_0.3	3/11/2021	Nitrobenzene-d5 (surr.)	132	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP187_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP187_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	126	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP187_0.1	3/11/2021	13C4-PFHpA (surr.)	128	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP187_0.1	3/11/2021	13C5-PFPeA (surr.)	130	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP187_0.1	3/11/2021	D5-N-EtFOSA (surr.)	66	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP187_0.1	3/11/2021	D9-N-EtFOSE (surr.)	72	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP187_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP187_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	104	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP187_0.3	3/11/2021	Dibutylchlorendate (surr.)	74	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP187_0.3	3/11/2021	D3-N-MeFOSAA (surr.)	52	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP188_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP188_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	124	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP188_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838537	Normal	SOIL	AI_TP188_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	125	%	0	0	
05 Nov 2021	838537	Normal	SOIL	AI_TP188_0.3	3/11/2021	13C8-PFOA (surr.)	127	%	20	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP188_0.3	3/11/2021	Dibutylchlorendate (surr.)	73	%	70	130	
05 Nov 2021	838537	Normal	SOIL	AI_TP188_0.3	3/11/2021	D3-N-MeFOSAA (surr.)	66	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.1	3/11/2021	Phenol-d6 (surr.)	68	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.1	3/11/2021	13C2-8:2 FTSA (surr.)	69	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.1	3/11/2021	13C3-PFBS (surr.)	128	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.1	3/11/2021	p-Terphenyl-d14 (surr.)	69	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.1	3/11/2021	Dibutylchlorendate (surr.)	61	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.1	3/11/2021	Toluene-d8 (surr.)	74	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.1	3/11/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.1	3/11/2021	Tetrachloro-m-xylene (surr.)	68	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.3	3/11/2021	13C2-8:2 FTSA (surr.)	61	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP189_0.3	3/11/2021	Dibutylchlorendate (surr.)	65	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.1	3/11/2021	Phenol-d6 (surr.)	63	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.1	3/11/2021	13C2-8:2 FTSA (surr.)	64	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.1	3/11/2021	13C3-PFBS (surr.)	131	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.1	3/11/2021	p-Terphenyl-d14 (surr.)	70	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.1	3/11/2021	Dibutylchlorendate (surr.)	67	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.1	3/11/2021	Toluene-d8 (surr.)	58	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.1	3/11/2021	4-Bromofluorobenzene (surr.)	59	%	50	150	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.1	3/11/2021	Tetrachloro-m-xylene (surr.)	67	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.3	3/11/2021	13C2-8:2 FTSA (surr.)	64	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.3	3/11/2021	p-Terphenyl-d14 (surr.)	69	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.3	3/11/2021	Dibutylchlorendate (surr.)	66	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP183_0.3	3/11/2021	Tetrachloro-m-xylene (surr.)	67	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	13C2-8:2 FTSA (surr.)	53	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	13C2-PFTeDA (surr.)	73	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	13C4-PFHpA (surr.)	70	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	p-Terphenyl-d14 (surr.)	73	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	Dibutylchlorendate (surr.)	73	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	Toluene-d8 (surr.)	69	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	4-Bromofluorobenzene (surr.)	68	%	50	150	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	Tetrachloro-m-xylene (surr.)	71	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	Triphenylphosphate (surr.)	65	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	Phenol-d6 (surr.)	70	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	13C2-6:2 FTSA (surr.)	159	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	13C2-8:2 FTSA (surr.)	69	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	13C3-PFBS (surr.)	126	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	13C5-PFPeA (surr.)	130	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	p-Terphenyl-d14 (surr.)	61	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	Dibutylchlorendate (surr.)	55	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	Toluene-d8 (surr.)	71	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	2-Fluorobiphenyl (surr.)	73	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	Nitrobenzene-d5 (surr.)	71	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	Tetrachloro-m-xylene (surr.)	58	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	D3-N-MeFOSA (surr.)	138	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	13C2-6:2 FTSA (surr.)	68	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	13C2-8:2 FTSA (surr.)	73	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	Dibutylchlorendate (surr.)	73	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	Toluene-d8 (surr.)	73	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	Tetrachloro-m-xylene (surr.)	72	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	13C2-8:2 FTSA (surr.)	69	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	Dibutylchlorendate (surr.)	66	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	Toluene-d8 (surr.)	69	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	Tetrachloro-m-xylene (surr.)	72	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	D3-N-MeFOSA (surr.)	128	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	Triphenylphosphate (surr.)	74	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	Phenol-d6 (surr.)	68	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	13C2-8:2 FTSA (surr.)	64	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	13C3-PFBS (surr.)	129	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	13C8-PFOA (surr.)	70	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	p-Terphenyl-d14 (surr.)	66	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	Dibutylchlorendate (surr.)	63	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	Toluene-d8 (surr.)	74	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.1	3/11/2021	Tetrachloro-m-xylene (surr.)	64	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	Dibutylchlorendate (surr.)	71	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP182_0.3	3/11/2021	D3-N-MeFOSA (surr.)	133	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	13C2-10:2 FTSA (surr.)	128	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	13C2-4:2 FTSA (surr.)	132	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	13C2-6:2 FTSA (surr.)	133	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	13C2-8:2 FTSA (surr.)	72	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	p-Terphenyl-d14 (surr.)	74	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	Dibutylchlorendate (surr.)	69	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.1	3/11/2021	Tetrachloro-m-xylene (surr.)	71	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	13C3-PFBS (surr.)	131	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	p-Terphenyl-d14 (surr.)	74	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	Dibutylchlorendate (surr.)	64	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	Tetrachloro-m-xylene (surr.)	72	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP181_0.3	3/11/2021	D3-N-MeFOSA (surr.)	138	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.1	3/11/2021	13C2-4:2 FTSA (surr.)	126	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.1	3/11/2021	13C3-PFBS (surr.)	137	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.1	3/11/2021	13C5-PFPeA (surr.)	131	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.1	3/11/2021	Dibutylchlorendate (surr.)	71	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.1	3/11/2021	Tetrachloro-m-xylene (surr.)	74	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.1	3/11/2021	D3-N-MeFOSA (surr.)	126	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.3	3/11/2021	Triphenylphosphate (surr.)	74	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.3	3/11/2021	13C3-PFBS (surr.)	147	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.3	3/11/2021	p-Terphenyl-d14 (surr.)	73	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.3	3/11/2021	Dibutylchlorendate (surr.)	61	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.3	3/11/2021	Tetrachloro-m-xylene (surr.)	70	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP176_0.3	3/11/2021	D3-N-MeFOSA (surr.)	148	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP152_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP152_0.1	3/11/2021	13C2-4:2 FTSA (surr.)	145	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP152_0.1	3/11/2021	13C2-8:2 FTSA (surr.)	73	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP152_0.1	3/11/2021	13C3-PFBS (surr.)	128	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP152_0.1	3/11/2021	13C6-PFDA (surr.)	141	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP152_0.1	3/11/2021	p-Terphenyl-d14 (surr.)	74	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP152_0.1	3/11/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
05 Nov 2021	838538	Normal	SOIL	AI_TP152_0.1	3/11/2021	Tetrachloro-m-xylene (surr.)	73	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP152_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP152_0.3	3/11/2021	13C3-PFBS (surr.)	136	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	64	%	0	0	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.1	3/11/2021	13C2-4:2 FTSA (surr.)	158	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.1	3/11/2021	13C2-6:2 FTSA (surr.)	149	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.1	3/11/2021	13C3-PFBS (surr.)	129	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.1	3/11/2021	Toluene-d8 (surr.)	63	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.1	3/11/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	62	%	0	0	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	135	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.3	3/11/2021	13C2-4:2 FTSA (surr.)	137	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.3	3/11/2021	13C3-PFBS (surr.)	137	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.3	3/11/2021	13C4-PFBA (surr.)	126	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.3	3/11/2021	13C5-PFPeA (surr.)	134	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP151_0.3	3/11/2021	D3-N-MeFOSA (surr.)	144	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.1	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.1	3/11/2021	13C2-4:2 FTSA (surr.)	-999	%	20	130	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.1	3/11/2021	13C2-6:2 FTSA (surr.)	137	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.1	3/11/2021	13C3-PFBS (surr.)	153	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.1	3/11/2021	13C6-PFDA (surr.)	135	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.1	3/11/2021	Toluene-d8 (surr.)	70	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.1	3/11/2021	4-Bromofluorobenzene (surr.)	72	%	50	150	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	13C2-10:2 FTSA (surr.)	131	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	13C2-4:2 FTSA (surr.)	136	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	13C3-PFBS (surr.)	139	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	13C8-FOSA (surr.)	129	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	p-Terphenyl-d14 (surr.)	74	%	30	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	Dibutylchlorendate (surr.)	70	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	D5-N-EtFOSAA (surr.)	130	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	Tetrachloro-m-xylene (surr.)	71	%	70	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	D3-N-MeFOSAA (surr.)	127	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	D3-N-MeFOSA (surr.)	143	%	20	130	
05 Nov 2021	838538	Normal	SOIL	AI_TP150_0.3	3/11/2021	D7-N-MeFOSE (surr.)	128	%	20	130	
05 Nov 2021	838538	Field_D	SOIL	AI_20211103_D01	3/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838538	Field_D	SOIL	AI_20211103_D01	3/11/2021	13C2-10:2 FTSA (surr.)	130	%	20	130	
05 Nov 2021	838538	Field_D	SOIL	AI_20211103_D01	3/11/2021	13C2-6:2 FTSA (surr.)	126	%	20	130	
05 Nov 2021	838538	Field_D	SOIL	AI_20211103_D01	3/11/2021	13C3-PFBS (surr.)	133	%	20	130	
05 Nov 2021	838538	Field_D	SOIL	AI_20211103_D01	3/11/2021	13C6-PFDA (surr.)	136	%	20	130	
05 Nov 2021	838538	Field_D	SOIL	AI_20211103_D01	3/11/2021	D5-N-EtFOSAA (surr.)	132	%	20	130	
05 Nov 2021	838538	Field_D	SOIL	AI_20211103_D01	3/11/2021	D3-N-MeFOSA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	145	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	Phenol-d6 (surr.)	136	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	117	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	13C2-4:2 FTSA (surr.)	165	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	13C2-6:2 FTSA (surr.)	135	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	13C2-8:2 FTSA (surr.)	51	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	13C2-PFTeDA (surr.)	41	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	13C3-PFBS (surr.)	129	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	13C5-PFPeA (surr.)	142	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	13C8-FOSA (surr.)	41	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	p-Terphenyl-d14 (surr.)	144	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	2-Fluorobiphenyl (surr.)	141	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	D3-N-MeFOSA (surr.)	41	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	D5-N-EtFOSA (surr.)	36	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	D7-N-MeFOSE (surr.)	37	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.1	4/11/2021	D9-N-EtFOSE (surr.)	31	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	139	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	Phenol-d6 (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	184	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	13C2-8:2 FTSA (surr.)	53	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	13C2-PFTeDA (surr.)	129	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	13C5-PFPeA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	13C8-PFOS (surr.)	126	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	p-Terphenyl-d14 (surr.)	145	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	2-Fluorobiphenyl (surr.)	140	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	D5-N-EtFOSAA (surr.)	73	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	D3-N-MeFOSAA (surr.)	61	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP05_0.3	4/11/2021	D5-N-EtFOSA (surr.)	69	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	35	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	13C2-4:2 FTSA (surr.)	160	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	13C2-6:2 FTSA (surr.)	126	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	13C2-8:2 FTSA (surr.)	68	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	13C3-PFBS (surr.)	133	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	13C4-PFHpA (surr.)	132	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	13C5-PFHxA (surr.)	133	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	D3-N-MeFOSAA (surr.)	45	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	D3-N-MeFOSA (surr.)	69	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.1	4/11/2021	D7-N-MeFOSE (surr.)	74	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	98	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	Phenol-d6 (surr.)	141	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	106	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	13C2-PFUnDA (surr.)	145	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	13C3-PFBS (surr.)	133	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	13C4-PFHpA (surr.)	127	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	13C5-PFNA (surr.)	154	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	13C8-PFOA (surr.)	130	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	D5-N-EtFOSAA (surr.)	136	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP08_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	129	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.1	4/11/2021	Triphenylphosphate (surr.)	128	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	112	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.1	4/11/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.1	4/11/2021	13C2-PFUnDA (surr.)	136	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.1	4/11/2021	13C2-PFTeDA (surr.)	73	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.1	4/11/2021	13C5-PFNA (surr.)	142	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.1	4/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.1	4/11/2021	2-Fluorobiphenyl (surr.)	138	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	96	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	109	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	13C2-4:2 FTSA (surr.)	71	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	13C2-PFDoDA (surr.)	133	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	13C2-PFUnDA (surr.)	144	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	13C2-PFTeDA (surr.)	72	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	13C5-PFNA (surr.)	136	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	2-Fluorobiphenyl (surr.)	145	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP12_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	108	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	Phenol-d6 (surr.)	134	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	111	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	13C2-6:2 FTSA (surr.)	139	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	13C2-PFDoDA (surr.)	142	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	13C2-PFTeDA (surr.)	68	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	13C3-PFBS (surr.)	132	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	13C5-PFNA (surr.)	144	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	2-Fluorobiphenyl (surr.)	142	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	154	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	Triphenylphosphate (surr.)	134	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	136	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	112	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	13C2-6:2 FTSA (surr.)	130	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	13C2-PFUnDA (surr.)	155	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	13C3-PFBS (surr.)	128	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	13C5-PFNA (surr.)	137	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	Dibutylchlorendate (surr.)	128	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP13_0.3	4/11/2021	Tetrachloro-m-xylene (surr.)	132	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	108	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	69	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	13C2-6:2 FTSA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	13C2-PFDoDA (surr.)	131	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	13C2-PFTeDA (surr.)	62	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	13C3-PFBS (surr.)	136	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	13C5-PFNA (surr.)	134	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	13C5-PFPeA (surr.)	131	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.1	4/11/2021	D3-N-MeFOSAA (surr.)	72	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	Triphenylphosphate (surr.)	137	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	143	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	13C2-PFUnDA (surr.)	146	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	13C5-PFNA (surr.)	134	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	Dibutylchlorendate (surr.)	127	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	Tetrachloro-m-xylene (surr.)	127	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP22_0.3	4/11/2021	D3-N-MeFOSAA (surr.)	70	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	113	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	Phenol-d6 (surr.)	126	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	126	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	13C2-PFDoDA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	13C2-PFUnDA (surr.)	131	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	13C2-PFTeDA (surr.)	73	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	13C5-PFNA (surr.)	135	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	2-Fluorobiphenyl (surr.)	141	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	128	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.1	4/11/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	104	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	Phenol-d6 (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	123	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	13C2-PFDoDA (surr.)	133	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	13C2-PFUnDA (surr.)	139	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	13C3-PFBS (surr.)	132	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	13C5-PFNA (surr.)	146	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	13C5-PFPeA (surr.)	127	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	13C6-PFDA (surr.)	131	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	2-Fluorobiphenyl (surr.)	147	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP21_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	50	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	Phenol-d6 (surr.)	50	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	116	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	13C2-PFUnDA (surr.)	151	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	13C3-PFBS (surr.)	130	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	13C5-PFNA (surr.)	132	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	Dibutylchlorendate (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	2-Fluorobiphenyl (surr.)	70	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	139	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.1	4/11/2021	Tetrachloro-m-xylene (surr.)	52	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.3	4/11/2021	Triphenylphosphate (surr.)	131	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	90	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	116	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.3	4/11/2021	13C2-PFDoDA (surr.)	142	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.3	4/11/2021	13C2-PFUnDA (surr.)	143	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.3	4/11/2021	13C3-PFBS (surr.)	131	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.3	4/11/2021	13C5-PFNA (surr.)	149	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.3	4/11/2021	13C6-PFDA (surr.)	130	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.3	4/11/2021	18O2-PFHxS (surr.)	131	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP29_0.3	4/11/2021	Tetrachloro-m-xylene (surr.)	128	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.1	4/11/2021	Triphenylphosphate (surr.)	127	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	128	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.1	4/11/2021	Phenol-d6 (surr.)	134	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	127	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.1	4/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.1	4/11/2021	13C3-PFBS (surr.)	132	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.1	4/11/2021	p-Terphenyl-d14 (surr.)	126	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	99	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	111	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.3	4/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.3	4/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.3	4/11/2021	13C5-PFNA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.3	4/11/2021	p-Terphenyl-d14 (surr.)	137	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.3	4/11/2021	D5-N-EtFOSAA (surr.)	133	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP30_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	146	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	118	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	124	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.1	4/11/2021	13C2-PFDoDA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.1	4/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.1	4/11/2021	13C5-PFHxA (surr.)	131	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.1	4/11/2021	13C5-PFNA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.1	4/11/2021	p-Terphenyl-d14 (surr.)	141	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.1	4/11/2021	2-Fluorobiphenyl (surr.)	128	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	148	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	94	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	136	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.3	4/11/2021	13C2-PFDoDA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.3	4/11/2021	13C2-PFUnDA (surr.)	149	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.3	4/11/2021	13C3-PFBS (surr.)	126	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.3	4/11/2021	13C5-PFNA (surr.)	141	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.3	4/11/2021	13C6-PFDA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.3	4/11/2021	2-Fluorobiphenyl (surr.)	58	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.3	4/11/2021	D5-N-EtFOSAA (surr.)	145	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP31_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	69	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	76	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	129	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.1	4/11/2021	13C2-6:2 FTSA (surr.)	135	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.1	4/11/2021	13C2-PFDoDA (surr.)	136	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.1	4/11/2021	13C2-PFUnDA (surr.)	143	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.1	4/11/2021	13C3-PFBS (surr.)	130	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.1	4/11/2021	13C5-PFNA (surr.)	142	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.1	4/11/2021	13C6-PFDA (surr.)	127	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.1	4/11/2021	Dibutylchlorendate (surr.)	72	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	139	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	108	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	116	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.3	4/11/2021	13C2-PFDoDA (surr.)	143	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.3	4/11/2021	13C2-PFUnDA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.3	4/11/2021	13C5-PFNA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.3	4/11/2021	p-Terphenyl-d14 (surr.)	136	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP41_0.3	4/11/2021	D5-N-EtFOSAA (surr.)	128	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	97	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	127	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.1	4/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.1	4/11/2021	13C2-PFUnDA (surr.)	133	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.1	4/11/2021	13C5-PFNA (surr.)	149	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.1	4/11/2021	Dibutylchlorendate (surr.)	69	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	155	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	138	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	143	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.3	4/11/2021	Phenol-d6 (surr.)	135	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	113	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.3	4/11/2021	13C2-PFDoDA (surr.)	132	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.3	4/11/2021	13C2-PFUnDA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.3	4/11/2021	13C5-PFNA (surr.)	130	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.3	4/11/2021	p-Terphenyl-d14 (surr.)	149	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.3	4/11/2021	D5-N-EtFOSAA (surr.)	143	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP40_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	105	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	118	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.1	4/11/2021	13C2-PFDoDA (surr.)	137	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.1	4/11/2021	13C2-PFUnDA (surr.)	137	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.1	4/11/2021	13C5-PFNA (surr.)	141	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.1	4/11/2021	13C6-PFDA (surr.)	130	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	133	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	150	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	114	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	128	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.3	4/11/2021	13C2-PFDoDA (surr.)	154	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.3	4/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.3	4/11/2021	13C3-PFBS (surr.)	137	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.3	4/11/2021	13C5-PFHxA (surr.)	131	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.3	4/11/2021	13C5-PFNA (surr.)	154	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.3	4/11/2021	13C6-PFDA (surr.)	129	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.3	4/11/2021	13C8-PFOA (surr.)	127	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP39_0.3	4/11/2021	D5-N-EtFOSAA (surr.)	134	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	109	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	127	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.1	4/11/2021	13C2-PFDoDA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.1	4/11/2021	13C2-PFUnDA (surr.)	145	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.1	4/11/2021	13C3-PFBS (surr.)	130	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.1	4/11/2021	13C5-PFNA (surr.)	145	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	156	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	146	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	121	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	132	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.3	4/11/2021	13C2-PFDoDA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.3	4/11/2021	13C2-PFUnDA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.3	4/11/2021	13C3-PFBS (surr.)	133	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.3	4/11/2021	13C5-PFNA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.3	4/11/2021	13C6-PFDA (surr.)	135	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.3	4/11/2021	Dibutylchlorendate (surr.)	74	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.3	4/11/2021	2-Fluorobiphenyl (surr.)	68	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP49_0.3	4/11/2021	D5-N-EtFOSAA (surr.)	140	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	118	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	123	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.1	4/11/2021	13C2-6:2 FTSA (surr.)	147	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.1	4/11/2021	13C2-PFUnDA (surr.)	142	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.1	4/11/2021	13C5-PFNA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.1	4/11/2021	p-Terphenyl-d14 (surr.)	135	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.1	4/11/2021	2-Fluorobiphenyl (surr.)	134	%	30	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.1	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	99	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	115	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.3	4/11/2021	13C2-PFDoDA (surr.)	132	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.3	4/11/2021	13C2-PFUnDA (surr.)	127	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.3	4/11/2021	Toluene-d8 (surr.)	52	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.3	4/11/2021	D5-N-EtFOSAA (surr.)	126	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	144	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP50_0.3	4/11/2021	4-Bromofluorobenzene (surr.)	52	%	50	150	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.1	4/11/2021	Triphenylphosphate (surr.)	69	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.1	4/11/2021	2.4.6-Tribromophenol (surr.)	61	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.1	4/11/2021	13C2-10:2 FTSA (surr.)	107	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.1	4/11/2021	13C5-PFNA (surr.)	137	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.1	4/11/2021	Dibutylchlorendate (surr.)	64	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.1	4/11/2021	D5-N-EtFOSAA (surr.)	127	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.1	4/11/2021	Tetrachloro-m-xylene (surr.)	69	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.1	4/11/2021	D3-N-MeFOSA (surr.)	73	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	Triphenylphosphate (surr.)	126	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	2.4.6-Tribromophenol (surr.)	138	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	Phenol-d6 (surr.)	150	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	13C2-10:2 FTSA (surr.)	132	%	0	0	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	13C2-6:2 FTSA (surr.)	138	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	13C2-PFDoDA (surr.)	153	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	13C2-PFUnDA (surr.)	139	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	13C5-PFNA (surr.)	144	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	13C5-PFPeA (surr.)	127	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	Toluene-d8 (surr.)	66	%	70	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	D5-N-EtFOSAA (surr.)	151	%	20	130	
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
05 Nov 2021	838539	Normal	SOIL	AI_TP51_0.3	4/11/2021	4-Bromofluorobenzene (surr.)	67	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	52	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.1	1/11/2021	13C2-8:2 FTSA (surr.)	148	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.1	1/11/2021	13C2-PFTeDA (surr.)	132	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.1	1/11/2021	D3-N-MeFOSA (surr.)	146	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.3	1/11/2021	13C2-8:2 FTSA (surr.)	143	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.3	1/11/2021	Dibutylchlorendate (surr.)	59	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.3	1/11/2021	Toluene-d8 (surr.)	72	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.3	1/11/2021	4-Bromofluorobenzene (surr.)	66	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.3	1/11/2021	Tetrachloro-m-xylene (surr.)	73	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP242_0.3	1/11/2021	D3-N-MeFOSA (surr.)	142	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.1	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.1	1/11/2021	Phenol-d6 (surr.)	70	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.1	1/11/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.1	1/11/2021	13C2-4:2 FTSA (surr.)	128	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.1	1/11/2021	13C2-8:2 FTSA (surr.)	137	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.1	1/11/2021	Dibutylchlorendate (surr.)	69	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.1	1/11/2021	18O2-PFHxS (surr.)	131	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.1	1/11/2021	4-Bromofluorobenzene (surr.)	71	%	50	150	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.1	1/11/2021	D3-N-MeFOSA (surr.)	138	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.3	1/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.3	1/11/2021	13C2-10:2 FTSA (surr.)	80	%	0	0	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.3	1/11/2021	13C2-4:2 FTSA (surr.)	72	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.3	1/11/2021	13C2-8:2 FTSA (surr.)	126	%	20	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.3	1/11/2021	Toluene-d8 (surr.)	62	%	70	130	
05 Nov 2021	838534	Normal	SOIL	AI_TP243_0.3	1/11/2021	D3-N-MeFOSA (surr.)	129	%	20	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP214_0.1	2/11/2021	2.4.6-Tribromophenol (surr.)	65	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP214_0.1	2/11/2021	p-Terphenyl-d14 (surr.)	74	%	30	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP214_0.1	2/11/2021	Toluene-d8 (surr.)	60	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP214_0.1	2/11/2021	2-Fluorobiphenyl (surr.)	73	%	30	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP214_0.1	2/11/2021	4-Bromofluorobenzene (surr.)	55	%	50	150	
05 Nov 2021	838535	Normal	SOIL	AI_TP214_0.1	2/11/2021	Tetrachloro-m-xylene (surr.)	69	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP214_0.3	2/11/2021	Triphenylphosphate (surr.)	133	%	70	130	
05 Nov 2021	838535	Normal	SOIL	AI_TP214_0.3	2/11/2021	2.4.6-Tribromophenol (surr.)	90	%	0	0	
05 Nov 2021	838535	Normal	SOIL	AI_TP214_0.3	2/11/2021	4-Bromofluorobenzene (surr.)	72	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0.1	8/11/2021	Triphenylphosphate (surr.)	135	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	57	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	84	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	134	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0.1	8/11/2021	13C2-6:2 FTSA (surr.)	159	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0.1	8/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0.1	8/11/2021	13C5-PFNA (surr.)	133	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0.1	8/11/2021	p-Terphenyl-d14 (surr.)	136	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0.1	8/11/2021	Dibutylchlorendate (surr.)	148	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0	8/11/2021	2.4.6-Tribromophenol (surr.)	61	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0	8/11/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0	8/11/2021	13C2-PFDoDA (surr.)	145	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0	8/11/2021	13C2-PFUnDA (surr.)	143	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0	8/11/2021	13C5-PFNA (surr.)	150	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0	8/11/2021	13C6-PFDA (surr.)	134	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0	8/11/2021	13C8-PFOS (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0	8/11/2021	18O2-PFHxS (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0	8/11/2021	Toluene-d8 (surr.)	65	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP145_0	8/11/2021	D5-N-EtFOSA (surr.)	138	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	Phenol-d6 (surr.)	50	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	108	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	141	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	13C2-6:2 FTSA (surr.)	129	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	13C2-PFDoDA (surr.)	155	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	13C2-PFUnDA (surr.)	144	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	13C3-PFBS (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	13C5-PFNA (surr.)	153	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	13C5-PFPeA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	13C6-PFDA (surr.)	145	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	13C8-PFOA (surr.)	136	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	18O2-PFHxS (surr.)	130	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	D5-N-EtFOSAA (surr.)	130	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	D3-N-MeFOSA (surr.)	126	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.1	8/11/2021	D5-N-EtFOSA (surr.)	138	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.2	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.2	8/11/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.2	8/11/2021	13C2-6:2 FTSA (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.2	8/11/2021	13C2-PFDoDA (surr.)	143	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.2	8/11/2021	13C2-PFUnDA (surr.)	131	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.2	8/11/2021	13C5-PFNA (surr.)	144	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.2	8/11/2021	13C6-PFDA (surr.)	143	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.2	8/11/2021	13C8-PFOA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0.2	8/11/2021	D5-N-EtFOSA (surr.)	131	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0	8/11/2021	13C2-10:2 FTSA (surr.)	94	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0	8/11/2021	13C2-PFDoDA (surr.)	130	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0	8/11/2021	13C2-PFUnDA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0	8/11/2021	13C5-PFNA (surr.)	130	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP144_0	8/11/2021	13C6-PFDA (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	Triphenylphosphate (surr.)	128	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	59	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	13C2-PFTeDA (surr.)	64	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	13C4-PFHpA (surr.)	70	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	13C5-PFHxA (surr.)	74	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	13C8-FOSA (surr.)	56	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	p-Terphenyl-d14 (surr.)	131	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	Dibutylchlorendate (surr.)	130	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	D3-N-MeFOSAA (surr.)	67	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	D3-N-MeFOSA (surr.)	73	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	D7-N-MeFOSE (surr.)	67	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0.1	8/11/2021	D9-N-EtFOSE (surr.)	59	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C2-10:2 FTSA (surr.)	105	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C2-4:2 FTSA (surr.)	131	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C2-6:2 FTSA (surr.)	130	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C2-PFDoDA (surr.)	149	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C2-PFUnDA (surr.)	144	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C3-PFBS (surr.)	131	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C4-PFBA (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C5-PFNA (surr.)	165	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C5-PFPeA (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C6-PFDA (surr.)	149	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C8-PFOA (surr.)	143	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	13C8-PFOS (surr.)	131	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	18O2-PFHxS (surr.)	136	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	D5-N-EtFOSAA (surr.)	134	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP143_0	8/11/2021	D5-N-EtFOSA (surr.)	142	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	155	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	13C2-6:2 FTSA (surr.)	177	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	13C2-PFDoDA (surr.)	135	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	13C5-PFNA (surr.)	147	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	13C6-PFDA (surr.)	137	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	13C8-PFOA (surr.)	130	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	18O2-PFHxS (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	Toluene-d8 (surr.)	62	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	72	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0.1	8/11/2021	D9-N-EtFOSE (surr.)	72	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0	8/11/2021	Triphenylphosphate (surr.)	127	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0	8/11/2021	2.4.6-Tribromophenol (surr.)	50	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0	8/11/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0	8/11/2021	13C2-PFDoDA (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0	8/11/2021	13C5-PFNA (surr.)	134	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP142_0	8/11/2021	D3-N-MeFOSAA (surr.)	65	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0.1	8/11/2021	Triphenylphosphate (surr.)	131	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	156	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0.1	8/11/2021	13C2-6:2 FTSA (surr.)	159	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0.1	8/11/2021	13C8-FOSA (surr.)	72	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0.1	8/11/2021	Dibutylchlorendate (surr.)	127	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0.1	8/11/2021	D9-N-EtFOSE (surr.)	73	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0	8/11/2021	13C2-10:2 FTSA (surr.)	85	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0	8/11/2021	13C8-FOSA (surr.)	66	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP147_0	8/11/2021	D3-N-MeFOSAA (surr.)	74	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0.1	8/11/2021	Triphenylphosphate (surr.)	129	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	150	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0.1	8/11/2021	13C2-6:2 FTSA (surr.)	169	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0.1	8/11/2021	13C2-PFDoDA (surr.)	140	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0.1	8/11/2021	13C2-PFUnDA (surr.)	126	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0.1	8/11/2021	13C5-PFNA (surr.)	147	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0.1	8/11/2021	13C6-PFDA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0.1	8/11/2021	13C8-PFOA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0	8/11/2021	Triphenylphosphate (surr.)	128	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0	8/11/2021	13C2-10:2 FTSA (surr.)	101	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0	8/11/2021	13C2-PFDoDA (surr.)	143	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0	8/11/2021	13C5-PFNA (surr.)	139	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP148_0	8/11/2021	13C6-PFDA (surr.)	134	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	13C2-6:2 FTSA (surr.)	131	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	13C2-PFDoDA (surr.)	139	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	13C3-PFBS (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	13C5-PFNA (surr.)	144	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	13C6-PFDA (surr.)	134	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	13C8-PFOA (surr.)	126	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	Toluene-d8 (surr.)	51	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	62	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0.1	8/11/2021	D5-N-EtFOSA (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0	8/11/2021	13C2-10:2 FTSA (surr.)	105	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0	8/11/2021	13C2-6:2 FTSA (surr.)	149	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0	8/11/2021	13C2-PFDoDA (surr.)	136	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0	8/11/2021	13C2-PFUnDA (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0	8/11/2021	13C5-PFNA (surr.)	147	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0	8/11/2021	13C6-PFDA (surr.)	129	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0	8/11/2021	13C8-PFOA (surr.)	131	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP149_0	8/11/2021	18O2-PFHxS (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0.1	8/11/2021	Triphenylphosphate (surr.)	139	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	155	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0.1	8/11/2021	13C2-6:2 FTSA (surr.)	181	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0.1	8/11/2021	13C2-PFTeDA (surr.)	74	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0.1	8/11/2021	13C8-FOSA (surr.)	66	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0.1	8/11/2021	Dibutylchlorendate (surr.)	132	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0.1	8/11/2021	D3-N-MeFOSAA (surr.)	71	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0.1	8/11/2021	D9-N-EtFOSE (surr.)	62	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	2.4.6-Tribromophenol (surr.)	72	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	13C2-10:2 FTSA (surr.)	69	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	13C2-4:2 FTSA (surr.)	69	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	13C2-8:2 FTSA (surr.)	69	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	13C2-PFTeDA (surr.)	67	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	13C4-PFHpA (surr.)	72	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	13C8-FOSA (surr.)	61	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	Toluene-d8 (surr.)	64	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	4-Bromofluorobenzene (surr.)	66	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	D3-N-MeFOSAA (surr.)	61	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	D7-N-MeFOSE (surr.)	69	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP146_0	8/11/2021	D9-N-EtFOSE (surr.)	63	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	69	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	148	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	13C2-6:2 FTSA (surr.)	159	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	13C2-PFDoDA (surr.)	130	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	13C3-PFBS (surr.)	126	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	13C5-PFNA (surr.)	140	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	13C6-PFDA (surr.)	130	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	13C8-FOSA (surr.)	74	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	p-Terphenyl-d14 (surr.)	135	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	Dibutylchlorendate (surr.)	-999	%	70	130	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	Toluene-d8 (surr.)	67	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	2-Fluorobiphenyl (surr.)	133	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	Nitrobenzene-d5 (surr.)	132	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	67	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	Triphenylphosphate (surr.)	137	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	2.4.6-Tribromophenol (surr.)	95	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	13C2-PFDoDA (surr.)	141	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	13C2-PFUnDA (surr.)	131	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	13C5-PFNA (surr.)	147	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	13C6-PFDA (surr.)	134	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	13C8-PFOA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	13C8-PFOS (surr.)	129	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	Dibutylchlorendate (surr.)	129	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP125_0	8/11/2021	D5-N-EtFOSA (surr.)	130	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP123_0.1	8/11/2021	Triphenylphosphate (surr.)	126	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP123_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP123_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	91	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP123_0.1	8/11/2021	Dibutylchlorendate (surr.)	130	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP123_0	8/11/2021	Triphenylphosphate (surr.)	129	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP123_0	8/11/2021	2.4.6-Tribromophenol (surr.)	53	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP123_0	8/11/2021	13C2-10:2 FTSA (surr.)	101	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP123_0	8/11/2021	Dibutylchlorendate (surr.)	129	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP123_0	8/11/2021	Toluene-d8 (surr.)	72	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0.1	8/11/2021	Triphenylphosphate (surr.)	140	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	74	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0.1	8/11/2021	Dibutylchlorendate (surr.)	144	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0.1	8/11/2021	Toluene-d8 (surr.)	58	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	58	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0.1	8/11/2021	D3-N-MeFOSAA (surr.)	72	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0.1	8/11/2021	D3-N-MeFOSA (surr.)	68	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0.1	8/11/2021	D5-N-EtFOSA (surr.)	71	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0	8/11/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP124_0	8/11/2021	13C2-6:2 FTSA (surr.)	71	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0.1	8/11/2021	Phenol-d6 (surr.)	68	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0.1	8/11/2021	D3-N-MeFOSA (surr.)	63	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0.1	8/11/2021	D5-N-EtFOSA (surr.)	73	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0	8/11/2021	Triphenylphosphate (surr.)	130	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0	8/11/2021	13C2-10:2 FTSA (surr.)	102	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0	8/11/2021	Toluene-d8 (surr.)	71	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0	8/11/2021	D5-N-EtFOSAA (surr.)	66	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP120_0	8/11/2021	D3-N-MeFOSAA (surr.)	62	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0.1	8/11/2021	Triphenylphosphate (surr.)	148	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0.1	8/11/2021	p-Terphenyl-d14 (surr.)	128	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0.1	8/11/2021	Dibutylchlorendate (surr.)	148	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0.1	8/11/2021	Toluene-d8 (surr.)	66	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0.1	8/11/2021	2-Fluorobiphenyl (surr.)	130	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0.1	8/11/2021	Nitrobenzene-d5 (surr.)	127	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	66	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0	8/11/2021	Triphenylphosphate (surr.)	130	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0	8/11/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP119_0	8/11/2021	Toluene-d8 (surr.)	73	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.1	8/11/2021	13C2-6:2 FTSA (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.1	8/11/2021	13C2-PFDoDA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.1	8/11/2021	13C2-PFTeDA (surr.)	129	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.1	8/11/2021	Toluene-d8 (surr.)	67	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	69	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.1	8/11/2021	D3-N-MeFOSA (surr.)	70	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.1	8/11/2021	D5-N-EtFOSA (surr.)	73	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.2	8/11/2021	Triphenylphosphate (surr.)	126	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.2	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.2	8/11/2021	13C2-10:2 FTSA (surr.)	102	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.2	8/11/2021	13C2-4:2 FTSA (surr.)	73	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP118_0.2	8/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP104_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP104_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP104_0.1	8/11/2021	Dibutylchlorendate (surr.)	71	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP104_0.1	8/11/2021	D3-N-MeFOSAA (surr.)	73	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP104_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP104_0	8/11/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP104_0	8/11/2021	Toluene-d8 (surr.)	71	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP104_0	8/11/2021	D5-N-EtFOSAA (surr.)	57	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP104_0	8/11/2021	4-Bromofluorobenzene (surr.)	69	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP104_0	8/11/2021	D3-N-MeFOSAA (surr.)	52	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	106	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	-999	%	20	130	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	13C2-8:2 FTSA (surr.)	67	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	13C2-PFUnDA (surr.)	70	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	13C5-PFNA (surr.)	68	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	13C8-PFOA (surr.)	71	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	18O2-PFHxS (surr.)	69	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	Toluene-d8 (surr.)	57	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	D5-N-EtFOSAA (surr.)	61	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	56	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	D3-N-MeFOSAA (surr.)	57	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	D3-N-MeFOSA (surr.)	49	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	D5-N-EtFOSA (surr.)	41	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	D7-N-MeFOSE (surr.)	66	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0.1	8/11/2021	D9-N-EtFOSE (surr.)	62	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0	8/11/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0	8/11/2021	13C2-PFDoDA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0	8/11/2021	13C2-PFTeDA (surr.)	142	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0	8/11/2021	Toluene-d8 (surr.)	60	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0	8/11/2021	D5-N-EtFOSAA (surr.)	66	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0	8/11/2021	4-Bromofluorobenzene (surr.)	60	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0	8/11/2021	D3-N-MeFOSAA (surr.)	64	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0	8/11/2021	D3-N-MeFOSA (surr.)	71	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP103_0	8/11/2021	D5-N-EtFOSA (surr.)	71	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP102_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP102_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	109	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP102_0.1	8/11/2021	Toluene-d8 (surr.)	65	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP102_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	64	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP102_0.1	8/11/2021	D3-N-MeFOSA (surr.)	74	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP102_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP102_0	8/11/2021	13C2-10:2 FTSA (surr.)	86	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP102_0	8/11/2021	D5-N-EtFOSAA (surr.)	66	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP102_0	8/11/2021	D3-N-MeFOSAA (surr.)	51	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0.1	8/11/2021	13C2-6:2 FTSA (surr.)	70	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0.1	8/11/2021	Toluene-d8 (surr.)	72	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0.1	8/11/2021	D5-N-EtFOSAA (surr.)	69	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0.1	8/11/2021	D3-N-MeFOSAA (surr.)	71	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0	8/11/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0	8/11/2021	13C2-6:2 FTSA (surr.)	72	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0	8/11/2021	Toluene-d8 (surr.)	73	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0	8/11/2021	D5-N-EtFOSAA (surr.)	59	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0	8/11/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0	8/11/2021	D3-N-MeFOSAA (surr.)	57	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP93_0	8/11/2021	D3-N-MeFOSA (surr.)	73	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	95	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0.1	8/11/2021	Toluene-d8 (surr.)	70	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	66	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0.1	8/11/2021	D3-N-MeFOSA (surr.)	73	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0	8/11/2021	13C2-10:2 FTSA (surr.)	104	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0	8/11/2021	13C2-6:2 FTSA (surr.)	66	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0	8/11/2021	Toluene-d8 (surr.)	74	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0	8/11/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0	8/11/2021	4-Bromofluorobenzene (surr.)	64	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0	8/11/2021	D3-N-MeFOSAA (surr.)	65	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP94_0	8/11/2021	D3-N-MeFOSA (surr.)	74	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0.1	8/11/2021	13C2-PFTeDA (surr.)	131	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0.1	8/11/2021	Toluene-d8 (surr.)	67	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	59	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0	8/11/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0	8/11/2021	13C2-PFTeDA (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0	8/11/2021	Toluene-d8 (surr.)	68	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0	8/11/2021	D5-N-EtFOSAA (surr.)	60	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0	8/11/2021	4-Bromofluorobenzene (surr.)	62	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP95_0	8/11/2021	D3-N-MeFOSAA (surr.)	58	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	13C2-PFTeDA (surr.)	133	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	p-Terphenyl-d14 (surr.)	128	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	Dibutylchlorendate (surr.)	141	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	Toluene-d8 (surr.)	63	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	2-Fluorobiphenyl (surr.)	128	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	56	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	D3-N-MeFOSA (surr.)	73	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.1	8/11/2021	D5-N-EtFOSA (surr.)	73	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.2	8/11/2021	Triphenylphosphate (surr.)	129	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.2	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.2	8/11/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.2	8/11/2021	13C2-PFDoDA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.2	8/11/2021	Dibutylchlorendate (surr.)	126	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP117_0.2	8/11/2021	4-Bromofluorobenzene (surr.)	72	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP111_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP111_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	104	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP111_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	133	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP111_0.1	8/11/2021	D3-N-MeFOSA (surr.)	72	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP111_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP111_0	8/11/2021	13C2-10:2 FTSA (surr.)	95	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP111_0	8/11/2021	13C2-PFDoDA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP111_0	8/11/2021	13C3-PFBS (surr.)	129	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP111_0	8/11/2021	4-Bromofluorobenzene (surr.)	68	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0.1	8/11/2021	13C2-PFDoDA (surr.)	126	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0.1	8/11/2021	13C2-PFTeDA (surr.)	145	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0.1	8/11/2021	Toluene-d8 (surr.)	68	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	59	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0	8/11/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0	8/11/2021	Toluene-d8 (surr.)	55	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0	8/11/2021	D5-N-EtFOSAA (surr.)	59	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0	8/11/2021	4-Bromofluorobenzene (surr.)	52	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP112_0	8/11/2021	D3-N-MeFOSAA (surr.)	55	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP113_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP113_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	80	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP113_0.1	8/11/2021	D3-N-MeFOSAA (surr.)	71	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP113_0.1	8/11/2021	D3-N-MeFOSA (surr.)	71	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
11 Nov 2021	841164	Normal	SOIL	AI_TP113_0	8/11/2021	Triphenylphosphate (surr.)	132	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP113_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP113_0	8/11/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP113_0	8/11/2021	D5-N-EtFOSAA (surr.)	72	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP113_0	8/11/2021	D3-N-MeFOSAA (surr.)	64	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0.1	8/11/2021	Triphenylphosphate (surr.)	142	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	82	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0.1	8/11/2021	Dibutylchlorendate (surr.)	134	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0.1	8/11/2021	D5-N-EtFOSAA (surr.)	68	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0.1	8/11/2021	D3-N-MeFOSAA (surr.)	72	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	Triphenylphosphate (surr.)	74	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	Phenol-d6 (surr.)	61	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	13C2-6:2 FTSA (surr.)	68	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	p-Terphenyl-d14 (surr.)	73	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	Dibutylchlorendate (surr.)	62	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	2-Fluorobiphenyl (surr.)	73	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	Nitrobenzene-d5 (surr.)	55	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	Tetrachloro-m-xylene (surr.)	67	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP126_0	8/11/2021	D3-N-MeFOSAA (surr.)	67	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0.1	8/11/2021	Triphenylphosphate (surr.)	142	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	88	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0.1	8/11/2021	p-Terphenyl-d14 (surr.)	133	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0.1	8/11/2021	Dibutylchlorendate (surr.)	137	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0.1	8/11/2021	2-Fluorobiphenyl (surr.)	127	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0.1	8/11/2021	D3-N-MeFOSAA (surr.)	71	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0	8/11/2021	Triphenylphosphate (surr.)	126	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0	8/11/2021	13C2-10:2 FTSA (surr.)	104	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0	8/11/2021	13C2-PFDoDA (surr.)	131	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0	8/11/2021	Dibutylchlorendate (surr.)	130	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0	8/11/2021	Toluene-d8 (surr.)	72	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0	8/11/2021	D5-N-EtFOSAA (surr.)	58	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0	8/11/2021	4-Bromofluorobenzene (surr.)	71	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP122_0	8/11/2021	D3-N-MeFOSAA (surr.)	59	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	87	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0.1	8/11/2021	Toluene-d8 (surr.)	73	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0.1	8/11/2021	D5-N-EtFOSAA (surr.)	73	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0	8/11/2021	Triphenylphosphate (surr.)	127	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0	8/11/2021	2.4.6-Tribromophenol (surr.)	51	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0	8/11/2021	13C2-10:2 FTSA (surr.)	98	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0	8/11/2021	13C2-PFDoDA (surr.)	138	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0	8/11/2021	13C2-PFUnDA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0	8/11/2021	13C5-PFNA (surr.)	137	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0	8/11/2021	13C6-PFDA (surr.)	135	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0	8/11/2021	D3-N-MeFOSAA (surr.)	73	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP121_0	8/11/2021	D5-N-EtFOSA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	2.4.6-Tribromophenol (surr.)	91	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	Phenol-d6 (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	13C2-4:2 FTSA (surr.)	126	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	13C2-PFUnDA (surr.)	133	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	13C5-PFNA (surr.)	144	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	13C6-PFDA (surr.)	139	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	13C8-PFOA (surr.)	128	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	p-Terphenyl-d14 (surr.)	138	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	Dibutylchlorendate (surr.)	-999	%	70	130	INT
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	Toluene-d8 (surr.)	58	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	2-Fluorobiphenyl (surr.)	137	%	30	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	Nitrobenzene-d5 (surr.)	131	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	4-Bromofluorobenzene (surr.)	52	%	50	150	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0.1	8/11/2021	D5-N-EtFOSA (surr.)	130	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0	8/11/2021	2.4.6-Tribromophenol (surr.)	58	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0	8/11/2021	13C2-10:2 FTSA (surr.)	86	%	0	0	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0	8/11/2021	13C5-PFNA (surr.)	127	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0	8/11/2021	13C8-FOSA (surr.)	71	%	20	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0	8/11/2021	Toluene-d8 (surr.)	72	%	70	130	
11 Nov 2021	841164	Normal	SOIL	AI_TP127_0	8/11/2021	4-Bromofluorobenzene (surr.)	64	%	50	150	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	Triphenylphosphate (surr.)	147	%	70	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	2.4.6-Tribromophenol (surr.)	67	%	0	0	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	p-Terphenyl-d14 (surr.)	149	%	30	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	Dibutylchlorendate (surr.)	131	%	70	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	Toluene-d8 (surr.)	73	%	70	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	2-Fluorobiphenyl (surr.)	133	%	30	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	Nitrobenzene-d5 (surr.)	128	%	70	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	Tetrachloro-m-xylene (surr.)	135	%	70	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	D3-N-MeFOSA (surr.)	74	%	20	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D01	8/11/2021	D5-N-EtFOSA (surr.)	71	%	20	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D02	8/11/2021	Triphenylphosphate (surr.)	136	%	70	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D02	8/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D02	8/11/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D02	8/11/2021	p-Terphenyl-d14 (surr.)	142	%	30	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D02	8/11/2021	Toluene-d8 (surr.)	71	%	70	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D02	8/11/2021	2-Fluorobiphenyl (surr.)	130	%	30	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D02	8/11/2021	Nitrobenzene-d5 (surr.)	134	%	70	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D02	8/11/2021	4-Bromofluorobenzene (surr.)	66	%	50	150	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D02	8/11/2021	Tetrachloro-m-xylene (surr.)	130	%	70	130	
11 Nov 2021	841164	Field_D	SOIL	AI_20211108_D02	8/11/2021	D3-N-MeFOSA (surr.)	74	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	54	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.1	15/11/2021	Phenol-d6 (surr.)	142	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.1	15/11/2021	13C2-PFTeDA (surr.)	130	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.1	15/11/2021	p-Terphenyl-d14 (surr.)	132	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.1	15/11/2021	Toluene-d8 (surr.)	72	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.1	15/11/2021	Nitrobenzene-d5 (surr.)	133	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP85_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP85_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	87	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP85_0.3	15/11/2021	13C2-PFUnDA (surr.)	133	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP85_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	71	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP85_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	72	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP84_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP84_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	80	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP84_0.1	15/11/2021	2-Fluorobiphenyl (surr.)	67	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP84_0.1	15/11/2021	D5-N-EtFOSAA (surr.)	71	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP84_0.1	15/11/2021	D7-N-MeFOSE (surr.)	73	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.1	15/11/2021	13C2-PFUnDA (surr.)	131	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.1	15/11/2021	13C2-PFTeDA (surr.)	126	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.1	15/11/2021	Toluene-d8 (surr.)	67	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.1	15/11/2021	2-Fluorobiphenyl (surr.)	66	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.1	15/11/2021	4-Bromofluorobenzene (surr.)	71	%	50	150	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.1	15/11/2021	D3-N-MeFOSAA (surr.)	73	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP82_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	52	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP82_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP82_0.1	15/11/2021	2-Fluorobiphenyl (surr.)	67	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	Phenol-d6 (surr.)	51	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	70	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	13C2-4:2 FTSA (surr.)	150	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	13C2-6:2 FTSA (surr.)	181	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	p-Terphenyl-d14 (surr.)	53	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	2-Fluorobiphenyl (surr.)	56	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	Nitrobenzene-d5 (surr.)	56	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	D3-N-MeFOSAA (surr.)	65	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	D5-N-EtFOSA (surr.)	69	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	D7-N-MeFOSE (surr.)	71	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.1	15/11/2021	D9-N-EtFOSE (surr.)	72	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.1	15/11/2021	Phenol-d6 (surr.)	51	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	91	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.1	15/11/2021	13C2-4:2 FTSA (surr.)	128	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.1	15/11/2021	p-Terphenyl-d14 (surr.)	64	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.1	15/11/2021	2-Fluorobiphenyl (surr.)	64	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.1	15/11/2021	Nitrobenzene-d5 (surr.)	66	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.1	15/11/2021	D5-N-EtFOSA (surr.)	74	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	74	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	76	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.1	15/11/2021	13C2-4:2 FTSA (surr.)	134	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.1	15/11/2021	13C2-PFUnDA (surr.)	131	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.1	15/11/2021	13C2-PFTeDA (surr.)	132	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.1	15/11/2021	2-Fluorobiphenyl (surr.)	71	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP100_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP100_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP100_0.1	15/11/2021	2-Fluorobiphenyl (surr.)	63	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP100_0.1	15/11/2021	D5-N-EtFOSA (surr.)	73	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	66	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	13C2-4:2 FTSA (surr.)	139	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	13C8-FOSA (surr.)	68	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	13C8-PFOS (surr.)	68	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	D5-N-EtFOSAA (surr.)	59	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	D3-N-MeFOSAA (surr.)	65	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	D3-N-MeFOSA (surr.)	60	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	D5-N-EtFOSA (surr.)	60	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	D7-N-MeFOSE (surr.)	71	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.1	15/11/2021	D9-N-EtFOSE (surr.)	59	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.3	15/11/2021	Phenol-d6 (surr.)	52	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	80	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.3	15/11/2021	13C2-PFTeDA (surr.)	135	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.3	15/11/2021	13C6-PFDA (surr.)	127	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.3	15/11/2021	p-Terphenyl-d14 (surr.)	59	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	71	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	82	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.1	15/11/2021	Nitrobenzene-d5 (surr.)	129	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.1	15/11/2021	13C2-4:2 FTSA (surr.)	134	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.1	15/11/2021	13C2-6:2 FTSA (surr.)	126	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.1	15/11/2021	p-Terphenyl-d14 (surr.)	126	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.1	15/11/2021	Nitrobenzene-d5 (surr.)	127	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	82	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.3	15/11/2021	13C2-6:2 FTSA (surr.)	127	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.3	15/11/2021	13C2-PFUnDA (surr.)	135	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.3	15/11/2021	13C2-PFTeDA (surr.)	129	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	63	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.3	15/11/2021	D5-N-EtFOSAA (surr.)	50	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP96_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	45	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP84_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP84_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	77	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP84_0.3	15/11/2021	D5-N-EtFOSAA (surr.)	69	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP84_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	65	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	69	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	72	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.3	15/11/2021	13C8-FOSA (surr.)	73	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.3	15/11/2021	13C8-PFOS (surr.)	74	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	64	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.3	15/11/2021	D5-N-EtFOSAA (surr.)	72	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	73	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.3	15/11/2021	D5-N-EtFOSA (surr.)	66	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP83_0.3	15/11/2021	D7-N-MeFOSE (surr.)	71	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP82_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP82_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP82_0.3	15/11/2021	13C2-PFUnDA (surr.)	128	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP82_0.3	15/11/2021	13C6-PFDA (surr.)	135	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211116-D01	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Field_D	SOIL	AI_20211116-D01	15/11/2021	13C2-10:2 FTSA (surr.)	103	%	0	0	
16 Nov 2021	842812	Field_D	SOIL	AI_20211116-D01	15/11/2021	13C2-PFUnDA (surr.)	126	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211116-D01	15/11/2021	Toluene-d8 (surr.)	69	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	83	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.3	15/11/2021	13C2-PFTeDA (surr.)	126	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	Triphenylphosphate (surr.)	71	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	Phenol-d6 (surr.)	69	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	77	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	13C2-4:2 FTSA (surr.)	135	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	13C2-PFUnDA (surr.)	135	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	13C2-PFTeDA (surr.)	130	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	13C6-PFDA (surr.)	129	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	p-Terphenyl-d14 (surr.)	67	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	Dibutylchlorendate (surr.)	58	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	Toluene-d8 (surr.)	71	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	74	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	D5-N-EtFOSAA (surr.)	62	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	Tetrachloro-m-xylene (surr.)	72	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP107_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	58	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	Triphenylphosphate (surr.)	61	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	Phenol-d6 (surr.)	56	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	64	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	13C8-FOSA (surr.)	71	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	13C8-PFOS (surr.)	67	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	p-Terphenyl-d14 (surr.)	52	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	Dibutylchlorendate (surr.)	66	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	18O2-PFHxS (surr.)	74	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	53	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	D5-N-EtFOSAA (surr.)	69	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	Nitrobenzene-d5 (surr.)	61	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	Tetrachloro-m-xylene (surr.)	55	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	61	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	D3-N-MeFOSA (surr.)	72	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	D5-N-EtFOSA (surr.)	63	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	D7-N-MeFOSE (surr.)	69	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP109_0.3	15/11/2021	D9-N-EtFOSE (surr.)	70	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	Triphenylphosphate (surr.)	68	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	Phenol-d6 (surr.)	61	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	13C2-4:2 FTSA (surr.)	154	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	13C2-PFUnDA (surr.)	135	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	13C2-PFTeDA (surr.)	131	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	p-Terphenyl-d14 (surr.)	59	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	62	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	Nitrobenzene-d5 (surr.)	70	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP110_0.3	15/11/2021	Tetrachloro-m-xylene (surr.)	65	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP99_0.3	15/11/2021	Triphenylphosphate (surr.)	69	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP99_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP99_0.3	15/11/2021	Phenol-d6 (surr.)	64	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP99_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	77	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP99_0.3	15/11/2021	p-Terphenyl-d14 (surr.)	60	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP99_0.3	15/11/2021	Toluene-d8 (surr.)	72	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP99_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	69	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP99_0.3	15/11/2021	Nitrobenzene-d5 (surr.)	72	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP99_0.3	15/11/2021	Tetrachloro-m-xylene (surr.)	63	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP100_0.3	15/11/2021	Triphenylphosphate (surr.)	127	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP100_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP100_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	84	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP100_0.3	15/11/2021	13C2-PFUnDA (surr.)	128	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP100_0.3	15/11/2021	13C2-PFTeDA (surr.)	138	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP100_0.3	15/11/2021	13C6-PFDA (surr.)	128	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	Triphenylphosphate (surr.)	71	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	Phenol-d6 (surr.)	72	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	86	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	p-Terphenyl-d14 (surr.)	60	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	Toluene-d8 (surr.)	74	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	70	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	D5-N-EtFOSAA (surr.)	46	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	Nitrobenzene-d5 (surr.)	71	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	Tetrachloro-m-xylene (surr.)	64	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP101_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	39	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.5	15/11/2021	Triphenylphosphate (surr.)	72	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.5	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.5	15/11/2021	Phenol-d6 (surr.)	69	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.5	15/11/2021	13C2-10:2 FTSA (surr.)	80	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.5	15/11/2021	13C2-6:2 FTSA (surr.)	134	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.5	15/11/2021	p-Terphenyl-d14 (surr.)	65	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.5	15/11/2021	Toluene-d8 (surr.)	68	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.5	15/11/2021	2-Fluorobiphenyl (surr.)	69	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.5	15/11/2021	Nitrobenzene-d5 (surr.)	69	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP92_0.5	15/11/2021	Tetrachloro-m-xylene (surr.)	67	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.3	15/11/2021	Phenol-d6 (surr.)	72	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	91	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.3	15/11/2021	p-Terphenyl-d14 (surr.)	62	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.3	15/11/2021	Toluene-d8 (surr.)	74	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	68	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.3	15/11/2021	Nitrobenzene-d5 (surr.)	66	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP91_0.3	15/11/2021	Tetrachloro-m-xylene (surr.)	69	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.3	15/11/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	85	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.3	15/11/2021	13C2-PFUnDA (surr.)	127	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	132	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.3	15/11/2021	Nitrobenzene-d5 (surr.)	139	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP90_0.3	15/11/2021	Tetrachloro-m-xylene (surr.)	131	%	70	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D01	15/11/2021	Triphenylphosphate (surr.)	148	%	70	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D01	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D01	15/11/2021	13C2-10:2 FTSA (surr.)	85	%	0	0	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D01	15/11/2021	13C2-PFDoDA (surr.)	138	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D01	15/11/2021	13C2-PFUnDA (surr.)	135	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D01	15/11/2021	Dibutylchlorendate (surr.)	-999	%	70	130	INT
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D01	15/11/2021	Toluene-d8 (surr.)	69	%	70	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D02	15/11/2021	Triphenylphosphate (surr.)	145	%	70	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D02	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D02	15/11/2021	13C2-10:2 FTSA (surr.)	74	%	0	0	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D02	15/11/2021	13C2-PFUnDA (surr.)	126	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D02	15/11/2021	Dibutylchlorendate (surr.)	-999	%	70	130	INT
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D02	15/11/2021	Nitrobenzene-d5 (surr.)	133	%	70	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D03	15/11/2021	13C2-10:2 FTSA (surr.)	78	%	0	0	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D03	15/11/2021	13C2-4:2 FTSA (surr.)	132	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D03	15/11/2021	13C2-6:2 FTSA (surr.)	127	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D03	15/11/2021	13C2-8:2 FTSA (surr.)	71	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D03	15/11/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_D03	15/11/2021	D5-N-EtFOSA (surr.)	74	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T02	15/11/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T02	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T02	15/11/2021	13C2-10:2 FTSA (surr.)	69	%	0	0	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T02	15/11/2021	13C4-PFHpA (surr.)	73	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T02	15/11/2021	Dibutylchlorendate (surr.)	-999	%	70	130	INT
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T02	15/11/2021	D5-N-EtFOSAA (surr.)	70	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T02	15/11/2021	Nitrobenzene-d5 (surr.)	136	%	70	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T02	15/11/2021	D3-N-MeFOSAA (surr.)	66	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T03	15/11/2021	13C2-10:2 FTSA (surr.)	78	%	0	0	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T03	15/11/2021	13C2-4:2 FTSA (surr.)	129	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T03	15/11/2021	13C2-6:2 FTSA (surr.)	126	%	20	130	
16 Nov 2021	842812	Field_D	SOIL	AI_20211115_T03	15/11/2021	D5-N-EtFOSA (surr.)	72	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	Phenol-d6 (surr.)	56	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	82	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	13C2-4:2 FTSA (surr.)	134	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	13C2-PFUnDA (surr.)	136	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	13C2-PFTeDA (surr.)	139	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	13C6-PFDA (surr.)	126	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	p-Terphenyl-d14 (surr.)	58	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	Dibutylchlorendate (surr.)	65	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	55	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	Nitrobenzene-d5 (surr.)	52	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	Tetrachloro-m-xylene (surr.)	56	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	72	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.1	15/11/2021	Phenol-d6 (surr.)	62	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	86	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.1	15/11/2021	13C2-4:2 FTSA (surr.)	134	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.1	15/11/2021	13C2-PFUnDA (surr.)	130	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.1	15/11/2021	13C2-PFTeDA (surr.)	126	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.1	15/11/2021	p-Terphenyl-d14 (surr.)	60	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.1	15/11/2021	2-Fluorobiphenyl (surr.)	63	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP78_0.1	15/11/2021	Nitrobenzene-d5 (surr.)	64	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	Phenol-d6 (surr.)	62	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	13C2-4:2 FTSA (surr.)	138	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	13C2-PFDoDA (surr.)	127	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	13C2-PFUnDA (surr.)	139	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	13C2-PFTeDA (surr.)	134	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	13C3-PFBS (surr.)	126	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	p-Terphenyl-d14 (surr.)	61	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	Dibutylchlorendate (surr.)	71	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	66	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	D5-N-EtFOSAA (surr.)	65	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	Nitrobenzene-d5 (surr.)	67	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	Tetrachloro-m-xylene (surr.)	61	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	66	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.1	15/11/2021	Phenol-d6 (surr.)	67	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	77	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.1	15/11/2021	13C6-PFDA (surr.)	127	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.1	15/11/2021	p-Terphenyl-d14 (surr.)	61	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.1	15/11/2021	Toluene-d8 (surr.)	138	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.1	15/11/2021	Nitrobenzene-d5 (surr.)	70	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP88_0.1	15/11/2021	4-Bromofluorobenzene (surr.)	148	%	50	150	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	Triphenylphosphate (surr.)	68	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	Phenol-d6 (surr.)	53	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	71	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	13C2-8:2 FTSA (surr.)	52	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	13C2-PFUnDA (surr.)	147	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	13C2-PFTeDA (surr.)	127	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	13C3-PFBS (surr.)	148	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	13C5-PFNA (surr.)	127	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	13C5-PFPeA (surr.)	137	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	13C6-PFDA (surr.)	133	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	p-Terphenyl-d14 (surr.)	51	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	Dibutylchlorendate (surr.)	57	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	18O2-PFHxS (surr.)	132	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	55	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	D5-N-EtFOSAA (surr.)	60	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	Nitrobenzene-d5 (surr.)	51	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	Tetrachloro-m-xylene (surr.)	50	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	67	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	D3-N-MeFOSA (surr.)	128	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	D5-N-EtFOSA (surr.)	163	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.3	15/11/2021	D7-N-MeFOSE (surr.)	166	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.1	15/11/2021	Phenol-d6 (surr.)	65	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.1	15/11/2021	13C2-4:2 FTSA (surr.)	152	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.1	15/11/2021	13C2-6:2 FTSA (surr.)	135	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.1	15/11/2021	13C2-PFUnDA (surr.)	127	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.1	15/11/2021	13C2-PFTeDA (surr.)	138	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.1	15/11/2021	p-Terphenyl-d14 (surr.)	63	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP98_0.1	15/11/2021	2-Fluorobiphenyl (surr.)	66	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.3	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.3	15/11/2021	13C2-10:2 FTSA (surr.)	58	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.3	15/11/2021	13C8-PFOS (surr.)	74	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.3	15/11/2021	Dibutylchlorendate (surr.)	146	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.3	15/11/2021	Toluene-d8 (surr.)	73	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.3	15/11/2021	2-Fluorobiphenyl (surr.)	126	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.3	15/11/2021	D5-N-EtFOSAA (surr.)	62	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.3	15/11/2021	Nitrobenzene-d5 (surr.)	130	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.3	15/11/2021	D3-N-MeFOSAA (surr.)	52	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	65	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.1	15/11/2021	13C2-8:2 FTSA (surr.)	56	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.1	15/11/2021	13C4-PFHpA (surr.)	72	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.1	15/11/2021	13C5-PFHxA (surr.)	73	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.1	15/11/2021	2-Fluorobiphenyl (surr.)	130	%	30	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.1	15/11/2021	D5-N-EtFOSAA (surr.)	53	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.1	15/11/2021	Nitrobenzene-d5 (surr.)	134	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.1	15/11/2021	D3-N-MeFOSAA (surr.)	59	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP115_0.1	15/11/2021	D9-N-EtFOSE (surr.)	63	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	Triphenylphosphate (surr.)	146	%	70	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	78	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	13C2-6:2 FTSA (surr.)	74	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	13C2-8:2 FTSA (surr.)	54	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	13C2-PFUnDA (surr.)	135	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	13C3-PFBS (surr.)	145	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	13C5-PFNA (surr.)	128	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	13C5-PFPeA (surr.)	143	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	13C6-PFDA (surr.)	128	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	18O2-PFHxS (surr.)	130	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	D5-N-EtFOSAA (surr.)	63	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	D3-N-MeFOSAA (surr.)	68	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP116_0.1	15/11/2021	D5-N-EtFOSA (surr.)	150	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	13C2-10:2 FTSA (surr.)	64	%	0	0	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	13C2-6:2 FTSA (surr.)	66	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	13C2-8:2 FTSA (surr.)	44	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	13C2-PFUnDA (surr.)	132	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	13C3-PFBS (surr.)	137	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	13C5-PFPeA (surr.)	140	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	D5-N-EtFOSAA (surr.)	57	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	D3-N-MeFOSAA (surr.)	65	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	D5-N-EtFOSA (surr.)	145	%	20	130	
16 Nov 2021	842812	Normal	SOIL	AI_TP89_0.1	15/11/2021	D9-N-EtFOSE (surr.)	73	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP54_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	111	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP54_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP54_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	81	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP54_0.5	25/10/2021	Phenol-d6 (surr.)	129	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP54_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	82	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP54_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	74	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP51_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	109	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP51_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	98	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP51_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	73	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP51_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	91	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP51_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP50_0.05	25/10/2021	2.4.6-Tribromophenol (surr.)	79	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP50_0.05	25/10/2021	Phenol-d6 (surr.)	130	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP50_0.05	25/10/2021	13C2-10:2 FTSA (surr.)	146	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP50_0.05	25/10/2021	13C2-8:2 FTSA (surr.)	145	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP50_0.05	25/10/2021	Dibutylchlorendate (surr.)	69	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP50_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	113	%	0	0	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP50_0.5	25/10/2021	Phenol-d6 (surr.)	135	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP50_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	77	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP50_0.5	25/10/2021	D5-N-EtFOSAA (surr.)	52	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP50_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	47	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP49_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	114	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP49_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	123	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP49_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	99	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP49_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	82	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP49_0.5	25/10/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP49_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	69	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP48_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	104	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP48_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	186	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP48_0.1	25/10/2021	13C2-8:2 FTSA (surr.)	185	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP48_0.1	25/10/2021	D5-N-EtFOSAA (surr.)	136	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP48_0.1	25/10/2021	D7-N-MeFOSE (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP48_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	101	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP48_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	85	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP47_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP47_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP47_0.1	25/10/2021	Dibutylchlorendate (surr.)	60	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP47_0.4	25/10/2021	2.4.6-Tribromophenol (surr.)	97	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP47_0.4	25/10/2021	13C2-10:2 FTSA (surr.)	84	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP47_0.4	25/10/2021	4-Bromofluorobenzene (surr.)	72	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP42_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	62	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP42_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP42_0.3	25/10/2021	2.4.6-Tribromophenol (surr.)	81	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP42_0.3	25/10/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP42_0.3	25/10/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	110	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.1	25/10/2021	13C2-4:2 FTSA (surr.)	138	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.1	25/10/2021	13C2-6:2 FTSA (surr.)	147	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.1	25/10/2021	13C2-8:2 FTSA (surr.)	192	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.1	25/10/2021	13C2-PFTeDA (surr.)	126	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.1	25/10/2021	D5-N-EtFOSAA (surr.)	167	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.1	25/10/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	142	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.4	25/10/2021	2.4.6-Tribromophenol (surr.)	137	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.4	25/10/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.4	25/10/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP43_0.4	25/10/2021	D3-N-MeFOSAA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.1	25/10/2021	13C2-4:2 FTSA (surr.)	157	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.1	25/10/2021	13C2-6:2 FTSA (surr.)	197	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.1	25/10/2021	13C2-8:2 FTSA (surr.)	-999	%	20	130	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.1	25/10/2021	13C2-PFTeDA (surr.)	127	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.1	25/10/2021	D5-N-EtFOSAA (surr.)	160	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.1	25/10/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	143	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	107	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	128	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.5	25/10/2021	13C2-8:2 FTSA (surr.)	132	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.5	25/10/2021	Toluene-d8 (surr.)	71	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP44_0.5	25/10/2021	4-Bromofluorobenzene (surr.)	68	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	141	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.1	25/10/2021	13C2-4:2 FTSA (surr.)	-999	%	20	130	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.1	25/10/2021	13C2-6:2 FTSA (surr.)	-999	%	20	130	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.1	25/10/2021	13C2-8:2 FTSA (surr.)	-999	%	20	130	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.1	25/10/2021	13C2-PFTeDA (surr.)	137	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.1	25/10/2021	Toluene-d8 (surr.)	63	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.1	25/10/2021	D5-N-EtFOSAA (surr.)	172	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.1	25/10/2021	4-Bromofluorobenzene (surr.)	55	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	157	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.4	25/10/2021	Triphenylphosphate (surr.)	145	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.4	25/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.4	25/10/2021	13C2-10:2 FTSA (surr.)	115	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.4	25/10/2021	13C2-PFTeDA (surr.)	139	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.4	25/10/2021	p-Terphenyl-d14 (surr.)	143	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.4	25/10/2021	Dibutylchlorendate (surr.)	138	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.4	25/10/2021	Toluene-d8 (surr.)	52	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.4	25/10/2021	Nitrobenzene-d5 (surr.)	134	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP45_0.4	25/10/2021	4-Bromofluorobenzene (surr.)	59	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP37_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	121	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP37_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP37_0.3	25/10/2021	2.4.6-Tribromophenol (surr.)	147	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP37_0.3	25/10/2021	13C2-10:2 FTSA (surr.)	94	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP37_0.3	25/10/2021	13C2-8:2 FTSA (surr.)	130	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP37_0.3	25/10/2021	13C5-PFPeA (surr.)	126	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP37_0.3	25/10/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP37_0.3	25/10/2021	D3-N-MeFOSAA (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP31_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	107	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP31_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	86	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP31_0.1	25/10/2021	4-Bromofluorobenzene (surr.)	71	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP31_0.4	25/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP31_0.4	25/10/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP31_0.4	25/10/2021	Toluene-d8 (surr.)	57	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP31_0.4	25/10/2021	4-Bromofluorobenzene (surr.)	62	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP32_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP32_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	112	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP32_0.1	25/10/2021	Toluene-d8 (surr.)	65	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP32_0.1	25/10/2021	4-Bromofluorobenzene (surr.)	60	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP32_0.4	25/10/2021	2.4.6-Tribromophenol (surr.)	103	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP32_0.4	25/10/2021	13C2-10:2 FTSA (surr.)	79	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP32_0.4	25/10/2021	Toluene-d8 (surr.)	57	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP32_0.4	25/10/2021	4-Bromofluorobenzene (surr.)	61	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP63_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	114	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP63_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	105	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP63_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	120	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP63_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP63_0.5	25/10/2021	13C5-PFPeA (surr.)	128	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP63_0.5	25/10/2021	2-Fluorobiphenyl (surr.)	128	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	127	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	131	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.1	25/10/2021	13C2-8:2 FTSA (surr.)	139	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.1	25/10/2021	Toluene-d8 (surr.)	68	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.1	25/10/2021	2-Fluorobiphenyl (surr.)	129	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.1	25/10/2021	D5-N-EtFOSAA (surr.)	134	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.1	25/10/2021	4-Bromofluorobenzene (surr.)	65	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	119	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	91	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.5	25/10/2021	13C2-8:2 FTSA (surr.)	65	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.5	25/10/2021	D5-N-EtFOSAA (surr.)	69	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP55_0.5	25/10/2021	4-Bromofluorobenzene (surr.)	69	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	138	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	102	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	13C2-6:2 FTSA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	13C2-PFDoDA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	13C2-PFUnDA (surr.)	38	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	13C8-FOSA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	Toluene-d8 (surr.)	73	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	45	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	D7-N-MeFOSE (surr.)	68	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.1	25/10/2021	D9-N-EtFOSE (surr.)	67	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	130	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	79	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.5	25/10/2021	13C2-6:2 FTSA (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.5	25/10/2021	13C2-8:2 FTSA (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.5	25/10/2021	2-Fluorobiphenyl (surr.)	135	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP56_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	131	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	113	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.1	25/10/2021	13C2-PFUnDA (surr.)	53	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.1	25/10/2021	4-Bromofluorobenzene (surr.)	70	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	61	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.1	25/10/2021	D7-N-MeFOSE (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.1	25/10/2021	D9-N-EtFOSE (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	107	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.5	25/10/2021	Phenol-d6 (surr.)	141	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	65	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	68	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.5	25/10/2021	13C2-6:2 FTSA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.5	25/10/2021	p-Terphenyl-d14 (surr.)	146	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.5	25/10/2021	2-Fluorobiphenyl (surr.)	134	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP64_0.5	25/10/2021	D5-N-EtFOSAA (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	97	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	Phenol-d6 (surr.)	138	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	85	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	13C2-6:2 FTSA (surr.)	73	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	13C2-8:2 FTSA (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	13C2-PFUnDA (surr.)	45	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	13C8-FOSA (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	p-Terphenyl-d14 (surr.)	144	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	2-Fluorobiphenyl (surr.)	134	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	66	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	D7-N-MeFOSE (surr.)	74	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.1	25/10/2021	D9-N-EtFOSE (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	99	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.5	25/10/2021	Phenol-d6 (surr.)	129	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	68	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.5	25/10/2021	13C2-8:2 FTSA (surr.)	73	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.5	25/10/2021	p-Terphenyl-d14 (surr.)	134	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	61	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP65_0.5	25/10/2021	D9-N-EtFOSE (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	99	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.1	25/10/2021	Phenol-d6 (surr.)	138	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	120	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.1	25/10/2021	13C2-6:2 FTSA (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.1	25/10/2021	13C2-PFUnDA (surr.)	65	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.1	25/10/2021	p-Terphenyl-d14 (surr.)	143	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.1	25/10/2021	2-Fluorobiphenyl (surr.)	132	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.1	25/10/2021	D9-N-EtFOSE (surr.)	67	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	99	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	Phenol-d6 (surr.)	136	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	84	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	59	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	13C2-6:2 FTSA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	13C2-PFUnDA (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	13C8-FOSA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	p-Terphenyl-d14 (surr.)	143	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	2-Fluorobiphenyl (surr.)	137	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	D5-N-EtFOSAA (surr.)	68	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	60	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP57_0.5	25/10/2021	D9-N-EtFOSE (surr.)	74	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	112	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	159	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.1	25/10/2021	13C2-PFUnDA (surr.)	38	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.1	25/10/2021	p-Terphenyl-d14 (surr.)	130	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	49	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.1	25/10/2021	D9-N-EtFOSE (surr.)	69	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	104	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	61	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.5	25/10/2021	13C2-6:2 FTSA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.5	25/10/2021	13C2-8:2 FTSA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.5	25/10/2021	13C2-PFUnDA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.5	25/10/2021	18O2-PFHxS (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.5	25/10/2021	D7-N-MeFOSE (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP59_0.5	25/10/2021	D9-N-EtFOSE (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	112	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	Phenol-d6 (surr.)	130	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	71	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	13C2-8:2 FTSA (surr.)	43	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	13C2-PFDoDA (surr.)	43	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	13C2-PFUnDA (surr.)	14	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	13C2-PFTeDA (surr.)	62	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	13C6-PFDA (surr.)	57	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	13C8-FOSA (surr.)	53	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	p-Terphenyl-d14 (surr.)	127	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	2-Fluorobiphenyl (surr.)	129	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	D5-N-EtFOSAA (surr.)	29	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	13	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	D5-N-EtFOSA (surr.)	73	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	D7-N-MeFOSE (surr.)	50	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.1	25/10/2021	D9-N-EtFOSE (surr.)	54	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	87	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	83	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	65	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	13C2-6:2 FTSA (surr.)	68	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	13C2-8:2 FTSA (surr.)	65	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	13C2-PFDoDA (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	13C2-PFUnDA (surr.)	61	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	p-Terphenyl-d14 (surr.)	129	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	D5-N-EtFOSAA (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	53	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	D7-N-MeFOSE (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP60_0.5	25/10/2021	D9-N-EtFOSE (surr.)	67	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	113	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	Phenol-d6 (surr.)	132	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	87	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	13C2-6:2 FTSA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	13C2-PFDoDA (surr.)	73	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	13C2-PFUnDA (surr.)	30	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	13C6-PFDA (surr.)	73	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	13C8-FOSA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	p-Terphenyl-d14 (surr.)	139	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	2-Fluorobiphenyl (surr.)	133	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	38	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	D7-N-MeFOSE (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.1	25/10/2021	D9-N-EtFOSE (surr.)	61	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	104	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	Phenol-d6 (surr.)	134	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	94	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	69	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	13C2-6:2 FTSA (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	13C2-PFUnDA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	13C8-FOSA (surr.)	73	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	p-Terphenyl-d14 (surr.)	137	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	2-Fluorobiphenyl (surr.)	133	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	D5-N-EtFOSAA (surr.)	48	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP61_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	51	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	108	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	Phenol-d6 (surr.)	126	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	104	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	13C2-6:2 FTSA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	13C2-8:2 FTSA (surr.)	62	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	13C2-PFDoDA (surr.)	73	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	13C2-PFUnDA (surr.)	52	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	13C8-FOSA (surr.)	73	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	p-Terphenyl-d14 (surr.)	129	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	46	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	D7-N-MeFOSE (surr.)	68	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.1	25/10/2021	D9-N-EtFOSE (surr.)	67	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	Triphenylphosphate (surr.)	126	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	120	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	Phenol-d6 (surr.)	145	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	78	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	62	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	13C2-6:2 FTSA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	13C2-8:2 FTSA (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	13C8-FOSA (surr.)	72	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	p-Terphenyl-d14 (surr.)	148	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	2-Fluorobiphenyl (surr.)	143	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP62_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	74	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	Triphenylphosphate (surr.)	135	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	148	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	Phenol-d6 (surr.)	-999	%	20	130	INT
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	112	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	13C2-8:2 FTSA (surr.)	69	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	13C2-PFDoDA (surr.)	64	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	13C2-PFUnDA (surr.)	24	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	13C8-FOSA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	p-Terphenyl-d14 (surr.)	133	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	Dibutylchlorendate (surr.)	126	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	2-Fluorobiphenyl (surr.)	144	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	D5-N-EtFOSAA (surr.)	58	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	Nitrobenzene-d5 (surr.)	129	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	28	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	D7-N-MeFOSE (surr.)	63	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.1	25/10/2021	D9-N-EtFOSE (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	2.4.6-Tribromophenol (surr.)	111	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	13C2-10:2 FTSA (surr.)	80	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	13C2-4:2 FTSA (surr.)	58	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	13C2-6:2 FTSA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	13C2-8:2 FTSA (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	13C2-PFDoDA (surr.)	65	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	13C2-PFUnDA (surr.)	69	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	13C4-PFBA (surr.)	74	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	D5-N-EtFOSAA (surr.)	66	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	D3-N-MeFOSAA (surr.)	64	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP52_0.5	25/10/2021	D9-N-EtFOSE (surr.)	71	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	2.4.6-Tribromophenol (surr.)	105	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	Phenol-d6 (surr.)	136	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	13C2-10:2 FTSA (surr.)	101	%	0	0	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	13C2-PFUnDA (surr.)	70	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	p-Terphenyl-d14 (surr.)	141	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	Toluene-d8 (surr.)	72	%	70	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	2-Fluorobiphenyl (surr.)	135	%	30	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	4-Bromofluorobenzene (surr.)	74	%	50	150	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	D3-N-MeFOSAA (surr.)	54	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	D7-N-MeFOSE (surr.)	74	%	20	130	
26 Oct 2021	835522	Normal	SOIL	AI_1B_TP53_0.1	25/10/2021	D9-N-EtFOSE (surr.)	66	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	2.4.6-Tribromophenol (surr.)	101	%	0	0	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	Phenol-d6 (surr.)	135	%	20	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	13C2-10:2 FTSA (surr.)	126	%	0	0	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	13C2-PFDoDA (surr.)	72	%	20	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	13C2-PFUnDA (surr.)	40	%	20	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	13C8-FOSA (surr.)	72	%	20	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	p-Terphenyl-d14 (surr.)	135	%	30	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	2-Fluorobiphenyl (surr.)	133	%	30	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	D3-N-MeFOSAA (surr.)	41	%	20	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	D7-N-MeFOSE (surr.)	67	%	20	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D01	25/10/2021	D9-N-EtFOSE (surr.)	74	%	20	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D02	25/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D02	25/10/2021	13C2-10:2 FTSA (surr.)	76	%	0	0	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D02	25/10/2021	13C2-6:2 FTSA (surr.)	54	%	20	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D02	25/10/2021	13C2-PFUnDA (surr.)	72	%	20	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D02	25/10/2021	13C6-PFDA (surr.)	70	%	20	130	
26 Oct 2021	835522	Field_D	SOIL	AI_1B_20211025_D02	25/10/2021	D7-N-MeFOSE (surr.)	69	%	20	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	Phenol-d6 (surr.)	64	%	20	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	13C2-8:2 FTSA (surr.)	68	%	20	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	13C2-PFTeDA (surr.)	71	%	20	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	13C8-PFOA (surr.)	130	%	20	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	Dibutylchlorendate (surr.)	-999	%	70	130	INT
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	D5-N-EtFOSAA (surr.)	71	%	20	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	Nitrobenzene-d5 (surr.)	141	%	70	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	D3-N-MeFOSAA (surr.)	58	%	20	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	D3-N-MeFOSA (surr.)	73	%	20	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	D5-N-EtFOSA (surr.)	62	%	20	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	D7-N-MeFOSE (surr.)	51	%	20	130	
26 Oct 2021	835522	Rinsate	WATER	AI_1B_20211025_R01	25/10/2021	D9-N-EtFOSE (surr.)	46	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP20_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	52	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP20_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	95	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP20_0.1	27/10/2021	Toluene-d8 (surr.)	55	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP20_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	53	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP20_0.4	27/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP20_0.4	27/10/2021	13C2-10:2 FTSA (surr.)	91	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP20_0.4	27/10/2021	4-Bromofluorobenzene (surr.)	62	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP15_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	53	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP15_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	147	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP15_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	149	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP15_0.1	27/10/2021	D5-N-EtFOSAA (surr.)	134	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP15_0.4	27/10/2021	2.4.6-Tribromophenol (surr.)	55	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP15_0.4	27/10/2021	13C2-10:2 FTSA (surr.)	92	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP15_0.4	27/10/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP15_0.4	27/10/2021	D3-N-MeFOSAA (surr.)	70	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP16_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP16_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	123	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP16_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	152	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP16_0.1	27/10/2021	Toluene-d8 (surr.)	73	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP16_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	61	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP16_0.4	27/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP16_0.4	27/10/2021	13C2-10:2 FTSA (surr.)	91	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP16_0.4	27/10/2021	Toluene-d8 (surr.)	137	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP16_0.4	27/10/2021	D5-N-EtFOSAA (surr.)	65	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP16_0.4	27/10/2021	D3-N-MeFOSAA (surr.)	63	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	84	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	115	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	136	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.1	27/10/2021	Toluene-d8 (surr.)	66	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	129	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	62	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.4	27/10/2021	2.4.6-Tribromophenol (surr.)	50	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.4	27/10/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.4	27/10/2021	Dibutylchlorendate (surr.)	74	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.4	27/10/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.4	27/10/2021	4-Bromofluorobenzene (surr.)	73	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP17_0.4	27/10/2021	D3-N-MeFOSAA (surr.)	69	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP18_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	108	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP18_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	129	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP18_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	138	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP18_0.4	27/10/2021	2.4.6-Tribromophenol (surr.)	102	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP18_0.4	27/10/2021	Toluene-d8 (surr.)	69	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP18_0.4	27/10/2021	4-Bromofluorobenzene (surr.)	62	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP12_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	95	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP12_0.1	27/10/2021	Phenol-d6 (surr.)	129	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP12_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	107	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP12_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	128	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP12_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	133	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP12_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	104	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP12_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	98	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP12_0.3	27/10/2021	D5-N-EtFOSAA (surr.)	65	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP12_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	59	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.1	27/10/2021	Triphenylphosphate (surr.)	138	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	105	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.1	27/10/2021	Phenol-d6 (surr.)	145	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	110	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	142	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.1	27/10/2021	p-Terphenyl-d14 (surr.)	136	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.1	27/10/2021	Toluene-d8 (surr.)	65	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.1	27/10/2021	2-Fluorobiphenyl (surr.)	135	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	101	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.3	27/10/2021	Phenol-d6 (surr.)	134	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.3	27/10/2021	Toluene-d8 (surr.)	51	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.3	27/10/2021	D5-N-EtFOSAA (surr.)	71	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.3	27/10/2021	Nitrobenzene-d5 (surr.)	137	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.3	27/10/2021	4-Bromofluorobenzene (surr.)	60	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP11_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	64	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.1	27/10/2021	Triphenylphosphate (surr.)	128	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	100	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.1	27/10/2021	Phenol-d6 (surr.)	135	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	110	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	134	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.1	27/10/2021	Toluene-d8 (surr.)	55	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.1	27/10/2021	2-Fluorobiphenyl (surr.)	126	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.1	27/10/2021	D5-N-EtFOSAA (surr.)	131	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	141	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	53	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	Triphenylphosphate (surr.)	132	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	92	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	Phenol-d6 (surr.)	145	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	87	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	p-Terphenyl-d14 (surr.)	131	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	Toluene-d8 (surr.)	51	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	2-Fluorobiphenyl (surr.)	132	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	D5-N-EtFOSAA (surr.)	67	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	Nitrobenzene-d5 (surr.)	149	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	4-Bromofluorobenzene (surr.)	56	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP10_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	59	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	103	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.1	27/10/2021	Phenol-d6 (surr.)	135	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	114	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	132	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.1	27/10/2021	Toluene-d8 (surr.)	60	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.1	27/10/2021	2-Fluorobiphenyl (surr.)	128	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.1	27/10/2021	D5-N-EtFOSAA (surr.)	126	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	145	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	65	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.3	27/10/2021	Triphenylphosphate (surr.)	129	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	68	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.3	27/10/2021	Phenol-d6 (surr.)	134	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.3	27/10/2021	p-Terphenyl-d14 (surr.)	129	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.3	27/10/2021	2-Fluorobiphenyl (surr.)	127	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP09_0.3	27/10/2021	Nitrobenzene-d5 (surr.)	144	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	87	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.1	27/10/2021	Phenol-d6 (surr.)	130	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	105	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.1	27/10/2021	Toluene-d8 (surr.)	66	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	141	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	71	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	Triphenylphosphate (surr.)	128	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	100	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	Phenol-d6 (surr.)	135	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	91	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	p-Terphenyl-d14 (surr.)	126	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	Toluene-d8 (surr.)	-999	%	70	130	INT
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	2-Fluorobiphenyl (surr.)	129	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	D5-N-EtFOSAA (surr.)	73	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	Nitrobenzene-d5 (surr.)	145	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	4-Bromofluorobenzene (surr.)	-999	%	50	150	INT
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP13_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	74	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	113	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	103	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.1	27/10/2021	Toluene-d8 (surr.)	-999	%	70	130	INT

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	135	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	-999	%	50	150	INT
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.1	27/10/2021	D7-N-MeFOSE (surr.)	72	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	Triphenylphosphate (surr.)	134	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	101	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	Phenol-d6 (surr.)	143	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	84	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	p-Terphenyl-d14 (surr.)	130	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	Toluene-d8 (surr.)	51	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	2-Fluorobiphenyl (surr.)	130	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	D5-N-EtFOSAA (surr.)	67	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	4-Bromofluorobenzene (surr.)	52	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP06_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	65	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	87	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	118	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.1	27/10/2021	Toluene-d8 (surr.)	56	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	127	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	57	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	93	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.3	27/10/2021	Phenol-d6 (surr.)	136	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	86	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.3	27/10/2021	Toluene-d8 (surr.)	63	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.3	27/10/2021	D5-N-EtFOSAA (surr.)	57	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.3	27/10/2021	Nitrobenzene-d5 (surr.)	143	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.3	27/10/2021	4-Bromofluorobenzene (surr.)	68	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	55	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.3	27/10/2021	D7-N-MeFOSE (surr.)	73	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP04_0.3	27/10/2021	D9-N-EtFOSE (surr.)	74	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	89	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	Phenol-d6 (surr.)	132	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	197	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	13C2-6:2 FTSA (surr.)	132	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	183	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	p-Terphenyl-d14 (surr.)	140	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	Toluene-d8 (surr.)	73	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	2-Fluorobiphenyl (surr.)	134	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	D5-N-EtFOSAA (surr.)	132	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	D3-N-MeFOSAA (surr.)	136	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	D5-N-EtFOSA (surr.)	74	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	D7-N-MeFOSE (surr.)	73	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.1	27/10/2021	D9-N-EtFOSE (surr.)	70	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	124	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.3	27/10/2021	Phenol-d6 (surr.)	132	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	98	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.3	27/10/2021	p-Terphenyl-d14 (surr.)	138	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.3	27/10/2021	2-Fluorobiphenyl (surr.)	127	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.3	27/10/2021	D5-N-EtFOSAA (surr.)	60	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP03_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	55	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	100	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.1	27/10/2021	Phenol-d6 (surr.)	126	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	127	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	132	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.1	27/10/2021	p-Terphenyl-d14 (surr.)	129	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.1	27/10/2021	2-Fluorobiphenyl (surr.)	131	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	Triphenylphosphate (surr.)	133	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	127	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	Phenol-d6 (surr.)	139	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	83	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	p-Terphenyl-d14 (surr.)	136	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	Toluene-d8 (surr.)	69	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	2-Fluorobiphenyl (surr.)	133	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	D5-N-EtFOSAA (surr.)	67	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	Nitrobenzene-d5 (surr.)	129	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	4-Bromofluorobenzene (surr.)	72	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP02_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	63	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	127	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	119	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	136	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.1	27/10/2021	Toluene-d8 (surr.)	-999	%	70	130	INT
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	133	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	-999	%	50	150	INT
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	123	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.3	27/10/2021	Phenol-d6 (surr.)	128	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.3	27/10/2021	D5-N-EtFOSAA (surr.)	64	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_1B_TP05_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	60	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP164_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	119	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP164_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	114	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP164_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	129	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP164_0.1	27/10/2021	Toluene-d8 (surr.)	129	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP164_0.4	27/10/2021	2.4.6-Tribromophenol (surr.)	101	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP164_0.4	27/10/2021	13C2-10:2 FTSA (surr.)	94	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP164_0.4	27/10/2021	13C5-PFPeA (surr.)	128	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP169_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	85	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP169_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	123	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP169_0.1	27/10/2021	Dibutylchlorendate (surr.)	68	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP169_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	62	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_TP169_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	100	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP169_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP168_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	103	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP168_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	135	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP168_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	143	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP168_0.1	27/10/2021	Toluene-d8 (surr.)	73	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP168_0.1	27/10/2021	D5-N-EtFOSAA (surr.)	148	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP168_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	62	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_TP168_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	110	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP168_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	100	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP168_0.3	27/10/2021	4-Bromofluorobenzene (surr.)	60	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	115	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	135	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	133	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.1	27/10/2021	Toluene-d8 (surr.)	67	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.1	27/10/2021	4-Bromofluorobenzene (surr.)	56	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	111	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.3	27/10/2021	Phenol-d6 (surr.)	143	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	103	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.3	27/10/2021	p-Terphenyl-d14 (surr.)	133	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.3	27/10/2021	2-Fluorobiphenyl (surr.)	129	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP163_0.3	27/10/2021	Nitrobenzene-d5 (surr.)	126	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP158_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	109	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP158_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	143	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP158_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	143	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP158_0.1	27/10/2021	p-Terphenyl-d14 (surr.)	131	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP158_0.1	27/10/2021	D5-N-EtFOSAA (surr.)	147	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP158_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	124	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP158_0.3	27/10/2021	Phenol-d6 (surr.)	135	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP158_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	108	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP158_0.3	27/10/2021	13C2-8:2 FTSA (surr.)	130	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP158_0.3	27/10/2021	13C5-PFPeA (surr.)	128	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	93	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	-999	%	0	0	INT
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	13C2-4:2 FTSA (surr.)	166	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	13C2-6:2 FTSA (surr.)	193	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	-999	%	20	130	INT
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	13C2-PFTeDA (surr.)	72	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	13C8-FOSA (surr.)	63	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	Dibutylchlorendate (surr.)	70	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	141	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	D3-N-MeFOSA (surr.)	60	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	D5-N-EtFOSA (surr.)	62	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	D7-N-MeFOSE (surr.)	57	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.1	27/10/2021	D9-N-EtFOSE (surr.)	54	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	107	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.3	27/10/2021	Phenol-d6 (surr.)	128	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP167_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	112	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP171_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	121	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP171_0.1	27/10/2021	Phenol-d6 (surr.)	128	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP171_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	109	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP171_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	119	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP171_0.3	27/10/2021	Phenol-d6 (surr.)	136	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP171_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP172_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	120	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP172_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	120	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP172_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	144	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP172_0.1	27/10/2021	D5-N-EtFOSAA (surr.)	128	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP172_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	117	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP172_0.3	27/10/2021	Phenol-d6 (surr.)	136	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP172_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP172_0.3	27/10/2021	Toluene-d8 (surr.)	70	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP172_0.3	27/10/2021	4-Bromofluorobenzene (surr.)	61	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	117	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.1	27/10/2021	Phenol-d6 (surr.)	138	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	159	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	152	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.1	27/10/2021	p-Terphenyl-d14 (surr.)	126	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.1	27/10/2021	2-Fluorobiphenyl (surr.)	134	%	30	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.1	27/10/2021	D5-N-EtFOSAA (surr.)	127	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	122	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.3	27/10/2021	Phenol-d6 (surr.)	134	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.3	27/10/2021	Toluene-d8 (surr.)	64	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.3	27/10/2021	4-Bromofluorobenzene (surr.)	60	%	50	150	
27 Oct 2021	836571	Normal	SOIL	AI_TP170_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	74	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP165_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	126	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP165_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	139	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP165_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	149	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP165_0.1	27/10/2021	D5-N-EtFOSAA (surr.)	134	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP165_0.1	27/10/2021	D7-N-MeFOSE (surr.)	74	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP165_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	147	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP165_0.3	27/10/2021	Phenol-d6 (surr.)	128	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP165_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	98	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP165_0.3	27/10/2021	Toluene-d8 (surr.)	68	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP165_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	73	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.1	27/10/2021	2.4.6-Tribromophenol (surr.)	136	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.1	27/10/2021	13C2-10:2 FTSA (surr.)	163	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.1	27/10/2021	13C2-8:2 FTSA (surr.)	155	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.1	27/10/2021	D5-N-EtFOSAA (surr.)	144	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.1	27/10/2021	Nitrobenzene-d5 (surr.)	128	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.1	27/10/2021	D3-N-MeFOSAA (surr.)	130	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.3	27/10/2021	Triphenylphosphate (surr.)	139	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.3	27/10/2021	Phenol-d6 (surr.)	140	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	94	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.3	27/10/2021	D5-N-EtFOSAA (surr.)	67	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.3	27/10/2021	Nitrobenzene-d5 (surr.)	150	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP166_0.3	27/10/2021	D3-N-MeFOSAA (surr.)	63	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP160_0.3	27/10/2021	Triphenylphosphate (surr.)	135	%	70	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP160_0.3	27/10/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
27 Oct 2021	836571	Normal	SOIL	AI_TP160_0.3	27/10/2021	Phenol-d6 (surr.)	126	%	20	130	
27 Oct 2021	836571	Normal	SOIL	AI_TP160_0.3	27/10/2021	13C2-10:2 FTSA (surr.)	103	%	0	0	
27 Oct 2021	836571	Normal	SOIL	AI_TP160_0.3	27/10/2021	Nitrobenzene-d5 (surr.)	143	%	70	130	
27 Oct 2021	836571	Field_D	SOIL	AI_1B_20211027_D01	27/10/2021	2.4.6-Tribromophenol (surr.)	121	%	0	0	
27 Oct 2021	836571	Field_D	SOIL	AI_1B_20211027_D01	27/10/2021	13C2-10:2 FTSA (surr.)	109	%	0	0	
27 Oct 2021	836571	Field_D	SOIL	AI_1B_20211027_D02	27/10/2021	2.4.6-Tribromophenol (surr.)	109	%	0	0	
27 Oct 2021	836571	Field_D	SOIL	AI_1B_20211027_D02	27/10/2021	Phenol-d6 (surr.)	131	%	20	130	
27 Oct 2021	836571	Field_D	SOIL	AI_1B_20211027_D02	27/10/2021	13C2-10:2 FTSA (surr.)	88	%	0	0	
27 Oct 2021	836571	Field_D	SOIL	AI_1B_20211027_D02	27/10/2021	D5-N-EtFOSAA (surr.)	67	%	20	130	
27 Oct 2021	836571	Field_D	SOIL	AI_1B_20211027_D02	27/10/2021	4-Bromofluorobenzene (surr.)	131	%	50	150	
27 Oct 2021	836571	Field_D	SOIL	AI_1B_20211027_D02	27/10/2021	D3-N-MeFOSAA (surr.)	66	%	20	130	
27 Oct 2021	836571	Trip_B	WATER	AI_TRIP BLANK	27/10/2021	4-Bromofluorobenzene (surr.)	129	%	50	150	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW01	9/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW01	9/02/2022	2.4.6-Tribromophenol (surr.)	52	%	0	0	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW01	9/02/2022	Phenol-d6 (surr.)	32	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW01	9/02/2022	13C2-10:2 FTSA (surr.)	132	%	0	0	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW01	9/02/2022	13C2-4:2 FTSA (surr.)	128	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW01	9/02/2022	13C2-6:2 FTSA (surr.)	173	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW01	9/02/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW01	9/02/2022	2-Fluorobiphenyl (surr.)	73	%	30	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW01	9/02/2022	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	2.4.6-Tribromophenol (surr.)	67	%	0	0	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	Phenol-d6 (surr.)	50	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	13C2-10:2 FTSA (surr.)	192	%	0	0	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	13C2-4:2 FTSA (surr.)	150	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	13C2-6:2 FTSA (surr.)	130	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	p-Terphenyl-d14 (surr.)	128	%	30	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	D5-N-EtFOSAA (surr.)	130	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	Nitrobenzene-d5 (surr.)	135	%	70	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW03	9/02/2022	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	2.4.6-Tribromophenol (surr.)	85	%	0	0	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	Phenol-d6 (surr.)	61	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	13C2-10:2 FTSA (surr.)	180	%	0	0	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	13C2-4:2 FTSA (surr.)	152	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	13C2-6:2 FTSA (surr.)	142	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	p-Terphenyl-d14 (surr.)	142	%	30	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	D5-N-EtFOSAA (surr.)	132	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW04	9/02/2022	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	2.4.6-Tribromophenol (surr.)	61	%	0	0	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	Phenol-d6 (surr.)	46	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	13C2-10:2 FTSA (surr.)	131	%	0	0	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	13C2-4:2 FTSA (surr.)	146	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	13C2-6:2 FTSA (surr.)	141	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	13C2-PFDoDA (surr.)	127	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	2-Fluorobiphenyl (surr.)	74	%	30	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	D5-N-EtFOSAA (surr.)	144	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW05	9/02/2022	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW06	9/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW06	9/02/2022	2.4.6-Tribromophenol (surr.)	67	%	0	0	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW06	9/02/2022	Phenol-d6 (surr.)	54	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW06	9/02/2022	13C2-10:2 FTSA (surr.)	117	%	0	0	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW06	9/02/2022	13C2-8:2 FTSA (surr.)	145	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW06	9/02/2022	13C4-PFBA (surr.)	69	%	20	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW06	9/02/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW06	9/02/2022	Nitrobenzene-d5 (surr.)	134	%	70	130	
09 Feb 2022	861777	Normal	WATER	A1_1B_MW06	9/02/2022	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Normal	WATER	A1_1B_MW06	9/02/2022	D7-N-MeFOSE (surr.)	74	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE01	9/02/2022	13C2-10:2 FTSA (surr.)	114	%	0	0	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE01	9/02/2022	13C2-8:2 FTSA (surr.)	138	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE02	9/02/2022	13C2-10:2 FTSA (surr.)	186	%	0	0	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE02	9/02/2022	13C2-8:2 FTSA (surr.)	165	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE02	9/02/2022	D5-N-EtFOSAA (surr.)	145	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	13C2-10:2 FTSA (surr.)	88	%	0	0	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	13C2-4:2 FTSA (surr.)	182	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	13C2-6:2 FTSA (surr.)	136	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	13C2-PFDoDA (surr.)	63	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	13C2-PFUnDA (surr.)	37	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	13C2-PFTeDA (surr.)	70	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	13C6-PFDA (surr.)	74	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	13C8-FOSA (surr.)	48	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	D5-N-EtFOSAA (surr.)	64	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	D3-N-MeFOSAA (surr.)	46	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	D3-N-MeFOSA (surr.)	58	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	D5-N-EtFOSA (surr.)	65	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	D7-N-MeFOSE (surr.)	62	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE03	9/02/2022	D9-N-EtFOSE (surr.)	63	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE04	9/02/2022	13C2-10:2 FTSA (surr.)	85	%	0	0	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE04	9/02/2022	13C2-4:2 FTSA (surr.)	132	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE04	9/02/2022	13C2-6:2 FTSA (surr.)	139	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE04	9/02/2022	13C2-8:2 FTSA (surr.)	154	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE04	9/02/2022	13C2-PFUnDA (surr.)	74	%	20	130	
09 Feb 2022	861777	Normal	SOIL	A1_1B_SE04	9/02/2022	D3-N-MeFOSAA (surr.)	70	%	20	130	
09 Feb 2022	861777	Field_D	WATER	20220209_D01	9/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Field_D	WATER	20220209_D01	9/02/2022	2.4.6-Tribromophenol (surr.)	75	%	0	0	
09 Feb 2022	861777	Field_D	WATER	20220209_D01	9/02/2022	Phenol-d6 (surr.)	55	%	20	130	
09 Feb 2022	861777	Field_D	WATER	20220209_D01	9/02/2022	13C2-10:2 FTSA (surr.)	102	%	0	0	
09 Feb 2022	861777	Field_D	WATER	20220209_D01	9/02/2022	13C2-4:2 FTSA (surr.)	143	%	20	130	
09 Feb 2022	861777	Field_D	WATER	20220209_D01	9/02/2022	13C2-6:2 FTSA (surr.)	135	%	20	130	
09 Feb 2022	861777	Field_D	WATER	20220209_D01	9/02/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Field_D	WATER	20220209_D01	9/02/2022	D5-N-EtFOSAA (surr.)	127	%	20	130	
09 Feb 2022	861777	Field_D	WATER	20220209_D01	9/02/2022	Nitrobenzene-d5 (surr.)	148	%	70	130	
09 Feb 2022	861777	Field_D	WATER	20220209_D01	9/02/2022	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Field_D	SOIL	20220209_D02	9/02/2022	13C2-10:2 FTSA (surr.)	104	%	0	0	
09 Feb 2022	861777	Field_D	SOIL	20220209_D02	9/02/2022	13C2-8:2 FTSA (surr.)	146	%	20	130	
09 Feb 2022	861777	Rinsate	WATER	20220209_R01	9/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Rinsate	WATER	20220209_R01	9/02/2022	2.4.6-Tribromophenol (surr.)	76	%	0	0	
09 Feb 2022	861777	Rinsate	WATER	20220209_R01	9/02/2022	Phenol-d6 (surr.)	35	%	20	130	
09 Feb 2022	861777	Rinsate	WATER	20220209_R01	9/02/2022	13C2-10:2 FTSA (surr.)	115	%	0	0	
09 Feb 2022	861777	Rinsate	WATER	20220209_R01	9/02/2022	13C2-4:2 FTSA (surr.)	132	%	20	130	
09 Feb 2022	861777	Rinsate	WATER	20220209_R01	9/02/2022	13C2-6:2 FTSA (surr.)	133	%	20	130	
09 Feb 2022	861777	Rinsate	WATER	20220209_R01	9/02/2022	p-Terphenyl-d14 (surr.)	128	%	30	130	
09 Feb 2022	861777	Rinsate	WATER	20220209_R01	9/02/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
09 Feb 2022	861777	Rinsate	WATER	20220209_R01	9/02/2022	Nitrobenzene-d5 (surr.)	147	%	70	130	
09 Feb 2022	861777	Rinsate	WATER	20220209_R01	9/02/2022	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP01_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	82	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP01_0.1	15/02/2022	Phenol-d6 (surr.)	130	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP01_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	113	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP01_0.1	15/02/2022	Nitrobenzene-d5 (surr.)	150	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP01_0.5	15/02/2022	2.4.6-Tribromophenol (surr.)	75	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP01_0.5	15/02/2022	13C2-10:2 FTSA (surr.)	94	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP01_0.5	15/02/2022	Nitrobenzene-d5 (surr.)	133	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.1	15/02/2022	Triphenylphosphate (surr.)	128	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	117	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.1	15/02/2022	Phenol-d6 (surr.)	148	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	100	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.1	15/02/2022	p-Terphenyl-d14 (surr.)	132	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.1	15/02/2022	Dibutylchlorendate (surr.)	137	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.1	15/02/2022	2-Fluorobiphenyl (surr.)	145	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.1	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.1	15/02/2022	Tetrachloro-m-xylene (surr.)	145	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.4	15/02/2022	2.4.6-Tribromophenol (surr.)	72	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.4	15/02/2022	13C2-10:2 FTSA (surr.)	130	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.4	15/02/2022	13C2-8:2 FTSA (surr.)	126	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP07_0.4	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	72	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	150	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.1	15/02/2022	13C2-4:2 FTSA (surr.)	150	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.1	15/02/2022	13C2-6:2 FTSA (surr.)	135	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.1	15/02/2022	13C2-8:2 FTSA (surr.)	163	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.1	15/02/2022	Nitrobenzene-d5 (surr.)	126	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.1	15/02/2022	D3-N-MeFOSA (surr.)	72	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.1	15/02/2022	D7-N-MeFOSE (surr.)	73	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.5	15/02/2022	Triphenylphosphate (surr.)	71	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.5	15/02/2022	2.4.6-Tribromophenol (surr.)	69	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.5	15/02/2022	13C2-10:2 FTSA (surr.)	121	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.5	15/02/2022	13C2-8:2 FTSA (surr.)	130	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP08_0.5	15/02/2022	Dibutylchlorendate (surr.)	69	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	96	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.1	15/02/2022	Phenol-d6 (surr.)	133	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	150	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.1	15/02/2022	13C2-8:2 FTSA (surr.)	144	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.1	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.5	15/02/2022	2.4.6-Tribromophenol (surr.)	88	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.5	15/02/2022	13C2-10:2 FTSA (surr.)	92	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.5	15/02/2022	Toluene-d8 (surr.)	132	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.5	15/02/2022	D5-N-EtFOSAA (surr.)	72	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.5	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.5	15/02/2022	4-Bromofluorobenzene (surr.)	126	%	50	150	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP14_0.5	15/02/2022	D3-N-MeFOSAA (surr.)	74	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	92	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.1	15/02/2022	Phenol-d6 (surr.)	127	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	132	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.1	15/02/2022	13C2-8:2 FTSA (surr.)	137	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.1	15/02/2022	Toluene-d8 (surr.)	139	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.1	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.1	15/02/2022	4-Bromofluorobenzene (surr.)	126	%	50	150	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.5	15/02/2022	2.4.6-Tribromophenol (surr.)	85	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.5	15/02/2022	Phenol-d6 (surr.)	132	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.5	15/02/2022	13C2-10:2 FTSA (surr.)	99	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.5	15/02/2022	p-Terphenyl-d14 (surr.)	129	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.5	15/02/2022	Toluene-d8 (surr.)	133	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.5	15/02/2022	D5-N-EtFOSAA (surr.)	66	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.5	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP19_0.5	15/02/2022	D3-N-MeFOSAA (surr.)	62	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	81	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	90	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.1	15/02/2022	D5-N-EtFOSAA (surr.)	71	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.1	15/02/2022	Nitrobenzene-d5 (surr.)	146	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.1	15/02/2022	D7-N-MeFOSE (surr.)	72	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	2.4.6-Tribromophenol (surr.)	90	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	Phenol-d6 (surr.)	132	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C2-10:2 FTSA (surr.)	67	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C2-6:2 FTSA (surr.)	67	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C2-PFDoDA (surr.)	62	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C2-PFUnDA (surr.)	64	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C2-PFTeDA (surr.)	66	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C4-PFHpA (surr.)	72	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C5-PFNA (surr.)	67	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C6-PFDA (surr.)	67	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C8-FOSA (surr.)	57	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C8-PFOA (surr.)	71	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	13C8-PFOS (surr.)	66	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	18O2-PFHxS (surr.)	72	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	2-Fluorobiphenyl (surr.)	126	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	D5-N-EtFOSAA (surr.)	51	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	D3-N-MeFOSAA (surr.)	51	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	D3-N-MeFOSA (surr.)	42	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	D5-N-EtFOSA (surr.)	43	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	D7-N-MeFOSE (surr.)	50	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP21_0.3	15/02/2022	D9-N-EtFOSE (surr.)	54	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP22_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	105	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP22_0.1	15/02/2022	Phenol-d6 (surr.)	128	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP22_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	92	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP22_0.1	15/02/2022	2-Fluorobiphenyl (surr.)	140	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP22_0.1	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP22_0.4	15/02/2022	2.4.6-Tribromophenol (surr.)	89	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP22_0.4	15/02/2022	Phenol-d6 (surr.)	129	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP22_0.4	15/02/2022	13C2-10:2 FTSA (surr.)	88	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP22_0.4	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.1	15/02/2022	Triphenylphosphate (surr.)	52	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.1	15/02/2022	Phenol-d6 (surr.)	63	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	123	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.1	15/02/2022	p-Terphenyl-d14 (surr.)	55	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.1	15/02/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.1	15/02/2022	Toluene-d8 (surr.)	127	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.1	15/02/2022	2-Fluorobiphenyl (surr.)	57	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.1	15/02/2022	Tetrachloro-m-xylene (surr.)	53	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.3	15/02/2022	2.4.6-Tribromophenol (surr.)	72	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.3	15/02/2022	Phenol-d6 (surr.)	141	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.3	15/02/2022	13C2-10:2 FTSA (surr.)	111	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.3	15/02/2022	Toluene-d8 (surr.)	135	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.3	15/02/2022	2-Fluorobiphenyl (surr.)	135	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP23_0.3	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.1	15/02/2022	Triphenylphosphate (surr.)	71	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	67	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	129	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.1	15/02/2022	Dibutylchlorendate (surr.)	72	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.1	15/02/2022	Toluene-d8 (surr.)	129	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.4	15/02/2022	2.4.6-Tribromophenol (surr.)	86	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.4	15/02/2022	13C2-10:2 FTSA (surr.)	84	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.4	15/02/2022	D5-N-EtFOSAA (surr.)	61	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.4	15/02/2022	Nitrobenzene-d5 (surr.)	150	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.4	15/02/2022	D3-N-MeFOSAA (surr.)	62	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP24_0.4	15/02/2022	D3-N-MeFOSA (surr.)	74	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.1	15/02/2022	Triphenylphosphate (surr.)	126	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	77	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	95	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.1	15/02/2022	13C8-FOSA (surr.)	74	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.1	15/02/2022	2-Fluorobiphenyl (surr.)	134	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.1	15/02/2022	D5-N-EtFOSAA (surr.)	66	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.1	15/02/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.1	15/02/2022	D3-N-MeFOSA (surr.)	72	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.1	15/02/2022	D7-N-MeFOSE (surr.)	73	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.4	15/02/2022	Triphenylphosphate (surr.)	138	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.4	15/02/2022	2.4.6-Tribromophenol (surr.)	75	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.4	15/02/2022	Phenol-d6 (surr.)	130	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.4	15/02/2022	13C2-10:2 FTSA (surr.)	91	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.4	15/02/2022	Dibutylchlorendate (surr.)	141	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.4	15/02/2022	2-Fluorobiphenyl (surr.)	129	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP29_0.4	15/02/2022	Nitrobenzene-d5 (surr.)	148	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.1	15/02/2022	Triphenylphosphate (surr.)	144	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	76	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.1	15/02/2022	Phenol-d6 (surr.)	147	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	153	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.1	15/02/2022	13C2-4:2 FTSA (surr.)	148	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.1	15/02/2022	Dibutylchlorendate (surr.)	150	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.1	15/02/2022	2-Fluorobiphenyl (surr.)	139	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.1	15/02/2022	Nitrobenzene-d5 (surr.)	146	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.1	15/02/2022	Tetrachloro-m-xylene (surr.)	126	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.3	15/02/2022	Triphenylphosphate (surr.)	126	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.3	15/02/2022	2.4.6-Tribromophenol (surr.)	74	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.3	15/02/2022	13C2-10:2 FTSA (surr.)	95	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.3	15/02/2022	Toluene-d8 (surr.)	127	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.3	15/02/2022	2-Fluorobiphenyl (surr.)	127	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP28_0.3	15/02/2022	Nitrobenzene-d5 (surr.)	142	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.1	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	104	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	80	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.1	15/02/2022	13C2-8:2 FTSA (surr.)	73	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.1	15/02/2022	13C8-FOSA (surr.)	73	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.1	15/02/2022	Dibutylchlorendate (surr.)	141	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.1	15/02/2022	D5-N-EtFOSAA (surr.)	70	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.1	15/02/2022	D3-N-MeFOSAA (surr.)	71	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.1	15/02/2022	D3-N-MeFOSA (surr.)	72	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.3	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.3	15/02/2022	2.4.6-Tribromophenol (surr.)	102	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.3	15/02/2022	13C2-10:2 FTSA (surr.)	71	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.3	15/02/2022	Dibutylchlorendate (surr.)	130	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.3	15/02/2022	D5-N-EtFOSAA (surr.)	64	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP27_0.3	15/02/2022	D3-N-MeFOSAA (surr.)	63	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP30_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	138	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP30_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	120	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP30_0.1	15/02/2022	2-Fluorobiphenyl (surr.)	131	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP30_0.3	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP30_0.3	15/02/2022	2.4.6-Tribromophenol (surr.)	118	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP30_0.3	15/02/2022	13C2-10:2 FTSA (surr.)	109	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP30_0.3	15/02/2022	Dibutylchlorendate (surr.)	139	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.1	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	111	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	103	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.1	15/02/2022	Dibutylchlorendate (surr.)	145	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.4	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.4	15/02/2022	2.4.6-Tribromophenol (surr.)	110	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.4	15/02/2022	13C2-10:2 FTSA (surr.)	83	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.4	15/02/2022	Dibutylchlorendate (surr.)	138	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.4	15/02/2022	D5-N-EtFOSAA (surr.)	64	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.4	15/02/2022	Nitrobenzene-d5 (surr.)	71	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP33_0.4	15/02/2022	D3-N-MeFOSAA (surr.)	62	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP34_0.1	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP34_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	115	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP34_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	112	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP34_0.1	15/02/2022	Dibutylchlorendate (surr.)	140	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP34_0.4	15/02/2022	2.4.6-Tribromophenol (surr.)	70	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP34_0.4	15/02/2022	13C2-10:2 FTSA (surr.)	87	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP34_0.4	15/02/2022	Toluene-d8 (surr.)	147	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP34_0.4	15/02/2022	D5-N-EtFOSAA (surr.)	67	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP34_0.4	15/02/2022	Nitrobenzene-d5 (surr.)	62	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP34_0.4	15/02/2022	D3-N-MeFOSAA (surr.)	59	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.1	15/02/2022	Triphenylphosphate (surr.)	128	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	73	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	86	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.1	15/02/2022	D5-N-EtFOSAA (surr.)	61	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.1	15/02/2022	4-Bromofluorobenzene (surr.)	67	%	50	150	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.1	15/02/2022	D3-N-MeFOSAA (surr.)	55	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.4	15/02/2022	2.4.6-Tribromophenol (surr.)	84	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.4	15/02/2022	13C2-10:2 FTSA (surr.)	79	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.4	15/02/2022	13C2-6:2 FTSA (surr.)	73	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.4	15/02/2022	D5-N-EtFOSAA (surr.)	37	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP35_0.4	15/02/2022	D3-N-MeFOSAA (surr.)	37	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.1	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	77	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	112	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.1	15/02/2022	Dibutylchlorendate (surr.)	126	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.1	15/02/2022	4-Bromofluorobenzene (surr.)	72	%	50	150	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.3	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.3	15/02/2022	2.4.6-Tribromophenol (surr.)	88	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.3	15/02/2022	13C2-10:2 FTSA (surr.)	88	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.3	15/02/2022	Dibutylchlorendate (surr.)	126	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.3	15/02/2022	D5-N-EtFOSAA (surr.)	70	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.3	15/02/2022	Nitrobenzene-d5 (surr.)	73	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.3	15/02/2022	4-Bromofluorobenzene (surr.)	70	%	50	150	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP36_0.3	15/02/2022	D3-N-MeFOSAA (surr.)	73	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP39_0.1	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP39_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	95	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP39_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	145	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP39_0.1	15/02/2022	Dibutylchlorendate (surr.)	149	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP39_0.1	15/02/2022	4-Bromofluorobenzene (surr.)	73	%	50	150	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP39_0.3	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP39_0.3	15/02/2022	2.4.6-Tribromophenol (surr.)	125	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP39_0.3	15/02/2022	13C2-10:2 FTSA (surr.)	100	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP39_0.3	15/02/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.05	15/02/2022	Triphenylphosphate (surr.)	138	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.05	15/02/2022	2.4.6-Tribromophenol (surr.)	84	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.05	15/02/2022	Phenol-d6 (surr.)	65	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.05	15/02/2022	13C2-10:2 FTSA (surr.)	98	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.05	15/02/2022	Nitrobenzene-d5 (surr.)	63	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.3	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.3	15/02/2022	2.4.6-Tribromophenol (surr.)	111	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.3	15/02/2022	13C2-10:2 FTSA (surr.)	86	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.3	15/02/2022	Dibutylchlorendate (surr.)	137	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.3	15/02/2022	D5-N-EtFOSAA (surr.)	71	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.3	15/02/2022	Nitrobenzene-d5 (surr.)	68	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP40_0.3	15/02/2022	D3-N-MeFOSAA (surr.)	65	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.1	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	111	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	99	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.1	15/02/2022	Dibutylchlorendate (surr.)	138	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.1	15/02/2022	4-Bromofluorobenzene (surr.)	73	%	50	150	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.4	15/02/2022	Triphenylphosphate (surr.)	141	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.4	15/02/2022	2.4.6-Tribromophenol (surr.)	87	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.4	15/02/2022	Phenol-d6 (surr.)	64	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.4	15/02/2022	13C2-10:2 FTSA (surr.)	92	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.4	15/02/2022	D5-N-EtFOSAA (surr.)	66	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.4	15/02/2022	Nitrobenzene-d5 (surr.)	60	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP41_0.4	15/02/2022	D3-N-MeFOSAA (surr.)	68	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP46_0.1	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP46_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	114	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP46_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	117	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP46_0.1	15/02/2022	Dibutylchlorendate (surr.)	150	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP46_0.5	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP46_0.5	15/02/2022	2.4.6-Tribromophenol (surr.)	109	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP46_0.5	15/02/2022	13C2-10:2 FTSA (surr.)	102	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP46_0.5	15/02/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.1	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	99	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.1	15/02/2022	Phenol-d6 (surr.)	68	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	174	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.1	15/02/2022	13C2-8:2 FTSA (surr.)	132	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.1	15/02/2022	Dibutylchlorendate (surr.)	150	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.1	15/02/2022	Toluene-d8 (surr.)	134	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.1	15/02/2022	D3-N-MeFOSA (surr.)	72	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.4	15/02/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.4	15/02/2022	2.4.6-Tribromophenol (surr.)	97	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.4	15/02/2022	Phenol-d6 (surr.)	74	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.4	15/02/2022	13C2-10:2 FTSA (surr.)	109	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.4	15/02/2022	D5-N-EtFOSAA (surr.)	69	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.4	15/02/2022	Nitrobenzene-d5 (surr.)	70	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP38_0.4	15/02/2022	D3-N-MeFOSAA (surr.)	62	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.1	15/02/2022	Triphenylphosphate (surr.)	134	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.1	15/02/2022	2.4.6-Tribromophenol (surr.)	69	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.1	15/02/2022	13C2-10:2 FTSA (surr.)	89	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.1	15/02/2022	Dibutylchlorendate (surr.)	141	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.1	15/02/2022	D5-N-EtFOSAA (surr.)	72	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.1	15/02/2022	Nitrobenzene-d5 (surr.)	139	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.1	15/02/2022	D3-N-MeFOSA (surr.)	74	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.4	15/02/2022	Triphenylphosphate (surr.)	131	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.4	15/02/2022	2.4.6-Tribromophenol (surr.)	67	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.4	15/02/2022	Phenol-d6 (surr.)	137	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.4	15/02/2022	13C2-10:2 FTSA (surr.)	91	%	0	0	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.4	15/02/2022	p-Terphenyl-d14 (surr.)	126	%	30	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.4	15/02/2022	Dibutylchlorendate (surr.)	138	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.4	15/02/2022	D5-N-EtFOSAA (surr.)	68	%	20	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.4	15/02/2022	Tetrachloro-m-xylene (surr.)	126	%	70	130	
15 Feb 2022	863497	Normal	SOIL	IA_IB_TP26_0.4	15/02/2022	D3-N-MeFOSAA (surr.)	70	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.1	9/11/2021	Phenol-d6 (surr.)	72	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	72	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.1	9/11/2021	D3-N-MeFOSAA (surr.)	74	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.3	9/11/2021	2.4.6-Tribromophenol (surr.)	53	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.3	9/11/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.3	9/11/2021	13C2-4:2 FTSA (surr.)	74	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.3	9/11/2021	13C2-6:2 FTSA (surr.)	70	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.3	9/11/2021	13C2-PFDoDA (surr.)	131	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.3	9/11/2021	13C5-PFNA (surr.)	130	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP03-0.3	9/11/2021	13C6-PFDA (surr.)	127	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	84	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.1	9/11/2021	13C2-4:2 FTSA (surr.)	143	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.1	9/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.1	9/11/2021	13C5-PFNA (surr.)	137	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.1	9/11/2021	13C6-PFDA (surr.)	131	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.3	9/11/2021	2.4.6-Tribromophenol (surr.)	51	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.3	9/11/2021	13C2-10:2 FTSA (surr.)	93	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.3	9/11/2021	13C2-PFDoDA (surr.)	137	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.3	9/11/2021	13C5-PFNA (surr.)	133	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.3	9/11/2021	13C6-PFDA (surr.)	134	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP02-0.3	9/11/2021	D3-N-MeFOSAA (surr.)	69	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP11-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Normal	SOIL	AI_TP11-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	107	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP11-0.1	9/11/2021	13C2-4:2 FTSA (surr.)	142	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP11-0.1	9/11/2021	13C2-PFDoDA (surr.)	141	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP11-0.1	9/11/2021	13C5-PFNA (surr.)	136	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP11-0.1	9/11/2021	13C6-PFDA (surr.)	138	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.1	9/11/2021	Phenol-d6 (surr.)	71	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	81	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.1	9/11/2021	13C2-PFDoDA (surr.)	129	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.1	9/11/2021	13C2-PFUnDA (surr.)	129	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.1	9/11/2021	13C5-PFNA (surr.)	126	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.1	9/11/2021	13C6-PFDA (surr.)	134	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.1	9/11/2021	2-Fluorobiphenyl (surr.)	74	%	30	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.3	9/11/2021	2.4.6-Tribromophenol (surr.)	56	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.3	9/11/2021	13C2-10:2 FTSA (surr.)	97	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.3	9/11/2021	13C2-4:2 FTSA (surr.)	137	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.3	9/11/2021	13C2-PFDoDA (surr.)	135	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.3	9/11/2021	13C2-PFUnDA (surr.)	129	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.3	9/11/2021	13C4-PFBA (surr.)	126	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.3	9/11/2021	13C5-PFNA (surr.)	137	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP15-0.3	9/11/2021	13C6-PFDA (surr.)	150	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	54	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.1	9/11/2021	13C2-4:2 FTSA (surr.)	151	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.1	9/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.1	9/11/2021	13C2-PFUnDA (surr.)	133	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.1	9/11/2021	13C5-PFNA (surr.)	140	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.1	9/11/2021	13C6-PFDA (surr.)	139	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.3	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.3	9/11/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.3	9/11/2021	13C2-PFDoDA (surr.)	150	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.3	9/11/2021	13C2-PFUnDA (surr.)	140	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.3	9/11/2021	13C5-PFNA (surr.)	136	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.3	9/11/2021	13C6-PFDA (surr.)	141	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP55-0.3	9/11/2021	4-Bromofluorobenzene (surr.)	137	%	50	150	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	52	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.1	9/11/2021	Phenol-d6 (surr.)	70	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	95	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.1	9/11/2021	13C2-PFDoDA (surr.)	132	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.1	9/11/2021	13C5-PFNA (surr.)	130	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.1	9/11/2021	13C6-PFDA (surr.)	130	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.3	9/11/2021	2.4.6-Tribromophenol (surr.)	50	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.3	9/11/2021	13C2-10:2 FTSA (surr.)	99	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.3	9/11/2021	13C2-4:2 FTSA (surr.)	144	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.3	9/11/2021	13C2-PFDoDA (surr.)	148	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.3	9/11/2021	13C2-PFTeDA (surr.)	128	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.3	9/11/2021	13C5-PFNA (surr.)	139	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP54-0.3	9/11/2021	13C6-PFDA (surr.)	135	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	50	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.1	9/11/2021	Phenol-d6 (surr.)	71	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	89	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.1	9/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.1	9/11/2021	13C2-PFUnDA (surr.)	134	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.1	9/11/2021	13C5-PFNA (surr.)	131	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.1	9/11/2021	13C6-PFDA (surr.)	139	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.3	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.3	9/11/2021	Phenol-d6 (surr.)	64	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.3	9/11/2021	13C2-10:2 FTSA (surr.)	101	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.3	9/11/2021	13C2-PFDoDA (surr.)	136	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.3	9/11/2021	13C5-PFNA (surr.)	132	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP43-0.3	9/11/2021	13C6-PFDA (surr.)	133	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP33-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Normal	SOIL	AI_TP33-0.1	9/11/2021	Phenol-d6 (surr.)	60	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP33-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	94	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP33-0.1	9/11/2021	13C2-PFDoDA (surr.)	140	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP33-0.1	9/11/2021	13C5-PFNA (surr.)	126	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP33-0.1	9/11/2021	p-Terphenyl-d14 (surr.)	64	%	30	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP33-0.1	9/11/2021	2-Fluorobiphenyl (surr.)	71	%	30	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP34-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Normal	SOIL	AI_TP34-0.1	9/11/2021	Phenol-d6 (surr.)	58	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP34-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	96	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP34-0.1	9/11/2021	13C2-4:2 FTSA (surr.)	147	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP34-0.1	9/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP34-0.1	9/11/2021	13C2-PFUnDA (surr.)	132	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP34-0.1	9/11/2021	13C5-PFNA (surr.)	135	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP34-0.1	9/11/2021	13C6-PFDA (surr.)	132	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	68	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.1	9/11/2021	Phenol-d6 (surr.)	72	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	105	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.1	9/11/2021	13C2-PFDoDA (surr.)	134	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.1	9/11/2021	13C5-PFNA (surr.)	126	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.1	9/11/2021	Toluene-d8 (surr.)	74	%	70	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	Triphenylphosphate (surr.)	72	%	70	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	Phenol-d6 (surr.)	53	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	13C2-10:2 FTSA (surr.)	87	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	13C2-4:2 FTSA (surr.)	64	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	13C2-6:2 FTSA (surr.)	71	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	13C2-PFDoDA (surr.)	131	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	13C6-PFDA (surr.)	128	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	p-Terphenyl-d14 (surr.)	61	%	30	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	2-Fluorobiphenyl (surr.)	64	%	30	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	Tetrachloro-m-xylene (surr.)	67	%	70	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP35-0.2	9/11/2021	D3-N-MeFOSAA (surr.)	59	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	Phenol-d6 (surr.)	56	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	103	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	13C2-4:2 FTSA (surr.)	130	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	13C2-PFDoDA (surr.)	139	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	13C2-PFTeDA (surr.)	127	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	13C5-PFNA (surr.)	135	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	13C6-PFDA (surr.)	132	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	p-Terphenyl-d14 (surr.)	60	%	30	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	Toluene-d8 (surr.)	73	%	70	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.1	9/11/2021	2-Fluorobiphenyl (surr.)	67	%	30	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.3	9/11/2021	Triphenylphosphate (surr.)	148	%	70	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.3	9/11/2021	2.4.6-Tribromophenol (surr.)	79	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.3	9/11/2021	13C2-10:2 FTSA (surr.)	94	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.3	9/11/2021	13C2-4:2 FTSA (surr.)	140	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.3	9/11/2021	13C2-PFDoDA (surr.)	141	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.3	9/11/2021	13C2-PFUnDA (surr.)	128	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.3	9/11/2021	13C5-PFNA (surr.)	141	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.3	9/11/2021	13C6-PFDA (surr.)	133	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.3	9/11/2021	Dibutylchlorendate (surr.)	148	%	70	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP36-0.3	9/11/2021	D5-N-EtFOSAA (surr.)	74	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.1	9/11/2021	2.4.6-Tribromophenol (surr.)	82	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.1	9/11/2021	Phenol-d6 (surr.)	71	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.1	9/11/2021	13C2-10:2 FTSA (surr.)	90	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.1	9/11/2021	13C2-4:2 FTSA (surr.)	127	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.1	9/11/2021	13C2-PFDoDA (surr.)	131	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.1	9/11/2021	13C5-PFNA (surr.)	132	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.3	9/11/2021	Triphenylphosphate (surr.)	150	%	70	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.3	9/11/2021	2.4.6-Tribromophenol (surr.)	87	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.3	9/11/2021	13C2-10:2 FTSA (surr.)	101	%	0	0	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.3	9/11/2021	13C2-4:2 FTSA (surr.)	128	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.3	9/11/2021	13C2-PFDoDA (surr.)	132	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.3	9/11/2021	13C6-PFDA (surr.)	133	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.3	9/11/2021	Dibutylchlorendate (surr.)	144	%	70	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.3	9/11/2021	D5-N-EtFOSAA (surr.)	73	%	20	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.3	9/11/2021	Tetrachloro-m-xylene (surr.)	134	%	70	130	
11 Nov 2021	853609	Normal	SOIL	AI_TP56-0.3	9/11/2021	D3-N-MeFOSAA (surr.)	64	%	20	130	
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	Triphenylphosphate (surr.)	-999	%	70	130	INT
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	Phenol-d6 (surr.)	57	%	20	130	
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	13C2-10:2 FTSA (surr.)	95	%	0	0	
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	13C2-4:2 FTSA (surr.)	152	%	20	130	
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	13C2-PFDoDA (surr.)	133	%	20	130	
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	13C2-PFUnDA (surr.)	127	%	20	130	
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	13C5-PFNA (surr.)	129	%	20	130	
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	13C6-PFDA (surr.)	132	%	20	130	
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	Dibutylchlorendate (surr.)	-999	%	70	130	INT
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	Toluene-d8 (surr.)	72	%	70	130	
11 Nov 2021	853609	Field_D	SOIL	AI_20211109-D01	9/11/2021	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	Triphenylphosphate (surr.)	135	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	98	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	13C2-4:2 FTSA (surr.)	142	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	13C2-6:2 FTSA (surr.)	145	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	13C2-PFDoDA (surr.)	128	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	13C6-PFDA (surr.)	134	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	p-Terphenyl-d14 (surr.)	147	%	30	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	Dibutylchlorendate (surr.)	142	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	2-Fluorobiphenyl (surr.)	142	%	30	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	Nitrobenzene-d5 (surr.)	129	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.1	16/06/2022	D5-N-EtFOSA (surr.)	132	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	63	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	132	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP128_0.3	16/06/2022	13C2-PFUnDA (surr.)	128	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	67	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.1	16/06/2022	Phenol-d6 (surr.)	69	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.1	16/06/2022	13C2-PFUnDA (surr.)	137	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.1	16/06/2022	13C6-PFDA (surr.)	140	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.1	16/06/2022	D5-N-EtFOSA (surr.)	130	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	81	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	142	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.3	16/06/2022	13C2-6:2 FTSA (surr.)	143	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.3	16/06/2022	13C2-PFDoDA (surr.)	138	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.3	16/06/2022	13C2-PFUnDA (surr.)	138	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.3	16/06/2022	13C6-PFDA (surr.)	134	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP129_0.3	16/06/2022	D5-N-EtFOSA (surr.)	129	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP130_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	58	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP130_0.1	16/06/2022	Phenol-d6 (surr.)	71	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP130_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	56	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP130_0.3	16/06/2022	D3-N-MeFOSAA (surr.)	71	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP130_0.3	16/06/2022	D7-N-MeFOSE (surr.)	19	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP131_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	60	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP131_0.1	16/06/2022	13C2-4:2 FTSA (surr.)	127	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP131_0.1	16/06/2022	13C2-6:2 FTSA (surr.)	141	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP131_0.1	16/06/2022	13C5-PFPeA (surr.)	-999	%	20	130	INT
17 Jun 2022	898926	Normal	SOIL	A1_TP131_0.1	16/06/2022	D7-N-MeFOSE (surr.)	65	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP131_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	71	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP131_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	130	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP131_0.3	16/06/2022	13C2-6:2 FTSA (surr.)	135	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
17 Jun 2022	898926	Normal	SOIL	A1_TP36_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	66	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP36_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
17 Jun 2022	898926	Normal	SOIL	A1_TP36_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	140	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP36_0.3	16/06/2022	13C2-6:2 FTSA (surr.)	128	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP36_0.3	16/06/2022	13C2-PFUnDA (surr.)	143	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP36_0.3	16/06/2022	13C6-PFDA (surr.)	129	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP36_0.3	16/06/2022	Toluene-d8 (surr.)	126	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP36_0.3	16/06/2022	D5-N-EtFOSA (surr.)	139	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP153_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	84	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP153_0.1	16/06/2022	Phenol-d6 (surr.)	71	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP153_0.1	16/06/2022	13C2-6:2 FTSA (surr.)	163	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP153_0.1	16/06/2022	Tetrachloro-m-xylene (surr.)	130	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP153_0.1	16/06/2022	D7-N-MeFOSE (surr.)	45	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP153_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
17 Jun 2022	898926	Normal	SOIL	A1_TP153_0.3	16/06/2022	D3-N-MeFOSAA (surr.)	73	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP153_0.3	16/06/2022	D7-N-MeFOSE (surr.)	55	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP159_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	78	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP159_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	146	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP159_0.3	16/06/2022	13C2-6:2 FTSA (surr.)	146	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP256_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	53	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP256_0.1	16/06/2022	D7-N-MeFOSE (surr.)	33	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP256_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	58	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP257_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	56	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP257_0.1	16/06/2022	Phenol-d6 (surr.)	72	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP257_0.1	16/06/2022	13C5-PFPeA (surr.)	-999	%	20	130	INT
17 Jun 2022	898926	Normal	SOIL	A1_TP257_0.1	16/06/2022	D5-N-EtFOSAA (surr.)	70	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP257_0.1	16/06/2022	D3-N-MeFOSAA (surr.)	64	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP257_0.1	16/06/2022	D7-N-MeFOSE (surr.)	19	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP257_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
17 Jun 2022	898926	Normal	SOIL	A1_TP257_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	67	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP257_0.3	16/06/2022	D7-N-MeFOSE (surr.)	69	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP258_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	54	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP258_0.1	16/06/2022	Phenol-d6 (surr.)	65	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP258_0.1	16/06/2022	D3-N-MeFOSAA (surr.)	73	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP258_0.1	16/06/2022	D7-N-MeFOSE (surr.)	69	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP258_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	70	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP258_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	28	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP258_0.3	16/06/2022	13C2-6:2 FTSA (surr.)	39	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP258_0.3	16/06/2022	D3-N-MeFOSAA (surr.)	73	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP259_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	63	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP259_0.1	16/06/2022	Phenol-d6 (surr.)	54	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP259_0.1	16/06/2022	13C2-6:2 FTSA (surr.)	127	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP259_0.1	16/06/2022	D3-N-MeFOSAA (surr.)	69	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP259_0.1	16/06/2022	D7-N-MeFOSE (surr.)	23	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP259_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	63	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP259_0.3	16/06/2022	Phenol-d6 (surr.)	66	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP259_0.3	16/06/2022	D7-N-MeFOSE (surr.)	28	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP260_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	73	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP260_0.1	16/06/2022	Phenol-d6 (surr.)	73	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP260_0.1	16/06/2022	D3-N-MeFOSAA (surr.)	73	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP260_0.1	16/06/2022	D7-N-MeFOSE (surr.)	61	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP260_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	53	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP260_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	133	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP260_0.3	16/06/2022	D5-N-EtFOSA (surr.)	130	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	68	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.1	16/06/2022	13C2-4:2 FTSA (surr.)	149	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.1	16/06/2022	13C2-6:2 FTSA (surr.)	152	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.1	16/06/2022	13C2-PFUnDA (surr.)	143	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.1	16/06/2022	13C6-PFDA (surr.)	141	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.1	16/06/2022	p-Terphenyl-d14 (surr.)	131	%	30	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.1	16/06/2022	18O2-PFHxS (surr.)	126	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.1	16/06/2022	Tetrachloro-m-xylene (surr.)	131	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.1	16/06/2022	D5-N-EtFOSA (surr.)	142	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	105	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	136	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.3	16/06/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
17 Jun 2022	898926	Normal	SOIL	A1_TP262_0.3	16/06/2022	D7-N-MeFOSE (surr.)	20	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.1	16/06/2022	Triphenylphosphate (surr.)	139	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	52	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.1	16/06/2022	13C2-4:2 FTSA (surr.)	128	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.1	16/06/2022	13C2-PFUnDA (surr.)	128	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.1	16/06/2022	13C5-PFPeA (surr.)	-999	%	20	130	INT
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.1	16/06/2022	p-Terphenyl-d14 (surr.)	135	%	30	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.1	16/06/2022	D3-N-MeFOSAA (surr.)	71	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.1	16/06/2022	D5-N-EtFOSA (surr.)	132	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	69	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	130	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.3	16/06/2022	13C2-PFDoDA (surr.)	131	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.3	16/06/2022	13C2-PFUnDA (surr.)	141	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.3	16/06/2022	13C6-PFDA (surr.)	130	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.3	16/06/2022	Dibutylchlorendate (surr.)	139	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.3	16/06/2022	Toluene-d8 (surr.)	129	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.3	16/06/2022	Tetrachloro-m-xylene (surr.)	73	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP303_0.3	16/06/2022	D5-N-EtFOSA (surr.)	142	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	73	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.1	16/06/2022	13C2-4:2 FTSA (surr.)	155	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.1	16/06/2022	13C2-6:2 FTSA (surr.)	139	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.1	16/06/2022	13C2-PFUnDA (surr.)	134	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.1	16/06/2022	13C6-PFDA (surr.)	132	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.1	16/06/2022	p-Terphenyl-d14 (surr.)	126	%	30	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.1	16/06/2022	D5-N-EtFOSA (surr.)	137	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.3	16/06/2022	Triphenylphosphate (surr.)	137	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	61	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	136	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.3	16/06/2022	13C2-6:2 FTSA (surr.)	128	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.3	16/06/2022	13C2-PFUnDA (surr.)	134	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.3	16/06/2022	13C3-PFBS (surr.)	127	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.3	16/06/2022	13C6-PFDA (surr.)	126	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP305_0.3	16/06/2022	D5-N-EtFOSA (surr.)	140	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.1	16/06/2022	Triphenylphosphate (surr.)	70	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.1	16/06/2022	2.4.6-Tribromophenol (surr.)	65	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.1	16/06/2022	13C2-4:2 FTSA (surr.)	64	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.1	16/06/2022	13C2-6:2 FTSA (surr.)	74	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.1	16/06/2022	4-Bromofluorobenzene (surr.)	143	%	50	150	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.3	16/06/2022	Triphenylphosphate (surr.)	129	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.3	16/06/2022	2.4.6-Tribromophenol (surr.)	73	%	0	0	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.3	16/06/2022	13C2-4:2 FTSA (surr.)	36	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.3	16/06/2022	13C2-6:2 FTSA (surr.)	46	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.3	16/06/2022	13C2-PFUnDA (surr.)	126	%	20	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.3	16/06/2022	Dibutylchlorendate (surr.)	128	%	70	130	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.3	16/06/2022	4-Bromofluorobenzene (surr.)	136	%	50	150	
17 Jun 2022	898926	Normal	SOIL	A1_TP315_0.3	16/06/2022	D5-N-EtFOSA (surr.)	145	%	20	130	
24 Jun 2022	900799	Trip_S	WATER	TRIP SPIKE	24/06/2022	4-Bromofluorobenzene (surr.)	69	%	50	150	
24 Jun 2022	900799	Trip_B	WATER	TRIP BLANK	24/06/2022	4-Bromofluorobenzene (surr.)	74	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C2-10:2 FTSA (surr.)	45	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C2-4:2 FTSA (surr.)	19	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C2-6:2 FTSA (surr.)	37	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	2-Fluorobiphenyl (surr.)	59	%	30	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	4-Bromofluorobenzene (surr.)	65	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	D3-N-MeFOSA (surr.)	61	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	D3-N-MeFOSAA (surr.)	67	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	D5-N-EtFOSA (surr.)	69	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C2-8:2 FTSA (surr.)	67	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C2-PFDoDA (surr.)	74	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C2-PFTeDA (surr.)	44	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C4-PFBA (surr.)	64	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C4-PFHpA (surr.)	70	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C5-PFHxA (surr.)	60	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C5-PFPeA (surr.)	70	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	13C8-FOSA (surr.)	60	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	D7-N-MeFOSE (surr.)	26	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	D9-N-EtFOSE (surr.)	26	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	Dibutylchlorendate (surr.)	65	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	Phenol-d6 (surr.)	52	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW01	24/06/2022	Toluene-d8 (surr.)	65	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C2-10:2 FTSA (surr.)	172	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C2-4:2 FTSA (surr.)	16	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C2-6:2 FTSA (surr.)	33	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C2-PFDoDA (surr.)	131	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C2-PFTeDA (surr.)	44	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C3-PFBS (surr.)	58	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C4-PFBA (surr.)	61	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C4-PFHpA (surr.)	61	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C5-PFHxA (surr.)	51	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C5-PFPeA (surr.)	64	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	13C8-PFOA (surr.)	74	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	2-Fluorobiphenyl (surr.)	54	%	30	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	2.4.6-Tribromophenol (surr.)	72	%	0	0	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	4-Bromofluorobenzene (surr.)	70	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	D3-N-MeFOSA (surr.)	57	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	D3-N-MeFOSAA (surr.)	137	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	D5-N-EtFOSA (surr.)	59	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	D7-N-MeFOSE (surr.)	28	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	D9-N-EtFOSE (surr.)	28	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	p-Terphenyl-d14 (surr.)	68	%	30	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	Tetrachloro-m-xylene (surr.)	55	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	Toluene-d8 (surr.)	68	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW02	24/06/2022	D5-N-EtFOSAA (surr.)	145	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	13C2-4:2 FTSA (surr.)	44	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	13C2-8:2 FTSA (surr.)	152	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	13C2-PFTeDA (surr.)	55	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	13C4-PFBA (surr.)	57	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	13C4-PFHpA (surr.)	71	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	13C5-PFHxA (surr.)	63	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	13C5-PFPeA (surr.)	70	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	13C8-FOSA (surr.)	71	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	2.4.6-Tribromophenol (surr.)	57	%	0	0	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	4-Bromofluorobenzene (surr.)	68	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	D3-N-MeFOSA (surr.)	54	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	D5-N-EtFOSA (surr.)	55	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	D7-N-MeFOSE (surr.)	28	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	D9-N-EtFOSE (surr.)	28	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	Phenol-d6 (surr.)	58	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	Toluene-d8 (surr.)	70	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW03	24/06/2022	Triphenylphosphate (surr.)	55	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C2-4:2 FTSA (surr.)	17	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C2-6:2 FTSA (surr.)	27	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C2-8:2 FTSA (surr.)	50	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C2-PFDoDA (surr.)	46	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C2-PFTeDA (surr.)	20	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C2-PFUnDA (surr.)	39	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C3-PFBS (surr.)	69	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C4-PFBA (surr.)	69	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C4-PFHpA (surr.)	56	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C5-PFHxA (surr.)	56	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C5-PFNA (surr.)	63	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C5-PFPeA (surr.)	70	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C6-PFDA (surr.)	48	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C8-FOSA (surr.)	40	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C8-PFOA (surr.)	65	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	4-Bromofluorobenzene (surr.)	63	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	D3-N-MeFOSA (surr.)	12	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	D3-N-MeFOSAA (surr.)	45	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	D5-N-EtFOSA (surr.)	13	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	D7-N-MeFOSE (surr.)	14	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	D9-N-EtFOSE (surr.)	14	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	p-Terphenyl-d14 (surr.)	71	%	30	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	Phenol-d6 (surr.)	42	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	Tetrachloro-m-xylene (surr.)	57	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	Toluene-d8 (surr.)	62	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	13C8-PFOS (surr.)	61	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW04	24/06/2022	D5-N-EtFOSAA (surr.)	47	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	13C2-4:2 FTSA (surr.)	57	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	13C2-8:2 FTSA (surr.)	141	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	13C2-PFTeDA (surr.)	39	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	13C2-PFUnDA (surr.)	69	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	13C4-PFBA (surr.)	58	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	13C4-PFHpA (surr.)	74	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	13C5-PFHxA (surr.)	64	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	13C5-PFPeA (surr.)	69	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	13C8-FOSA (surr.)	59	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	2-Fluorobiphenyl (surr.)	57	%	30	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	2.4.6-Tribromophenol (surr.)	104	%	0	0	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	4-Bromofluorobenzene (surr.)	65	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	D3-N-MeFOSA (surr.)	50	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	D5-N-EtFOSA (surr.)	53	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	D7-N-MeFOSE (surr.)	21	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	D9-N-EtFOSE (surr.)	21	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	Toluene-d8 (surr.)	64	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW05	24/06/2022	Triphenylphosphate (surr.)	56	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C2-10:2 FTSA (surr.)	61	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C2-4:2 FTSA (surr.)	24	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C2-6:2 FTSA (surr.)	39	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C2-8:2 FTSA (surr.)	58	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C2-PFDoDA (surr.)	50	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C2-PFTeDA (surr.)	32	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C2-PFUnDA (surr.)	54	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C4-PFBA (surr.)	71	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C4-PFHpA (surr.)	62	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C5-PFHxA (surr.)	58	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C5-PFNA (surr.)	62	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C6-PFDA (surr.)	61	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C8-FOSA (surr.)	48	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	13C8-PFOA (surr.)	66	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	2.4.6-Tribromophenol (surr.)	96	%	0	0	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	4-Bromofluorobenzene (surr.)	69	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	D3-N-MeFOSA (surr.)	40	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	D3-N-MeFOSAA (surr.)	47	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	D5-N-EtFOSA (surr.)	43	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	D7-N-MeFOSE (surr.)	16	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	D9-N-EtFOSE (surr.)	16	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	Dibutylchlorendate (surr.)	72	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	Phenol-d6 (surr.)	71	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	Toluene-d8 (surr.)	71	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	Triphenylphosphate (surr.)	62	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW06	24/06/2022	D5-N-EtFOSAA (surr.)	44	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	13C2-10:2 FTSA (surr.)	62	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	13C2-4:2 FTSA (surr.)	60	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	13C2-8:2 FTSA (surr.)	143	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	13C2-PFTeDA (surr.)	47	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	13C2-PFUnDA (surr.)	66	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	13C4-PFBA (surr.)	58	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	13C5-PFHxA (surr.)	71	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	13C5-PFPeA (surr.)	70	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	13C8-FOSA (surr.)	58	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	2.4.6-Tribromophenol (surr.)	72	%	0	0	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	4-Bromofluorobenzene (surr.)	68	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	D3-N-MeFOSA (surr.)	60	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	D3-N-MeFOSAA (surr.)	67	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	D5-N-EtFOSA (surr.)	63	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	D7-N-MeFOSE (surr.)	23	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	D9-N-EtFOSE (surr.)	23	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	Dibutylchlorendate (surr.)	68	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	Phenol-d6 (surr.)	42	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	Toluene-d8 (surr.)	69	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	Triphenylphosphate (surr.)	57	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW07	24/06/2022	D5-N-EtFOSAA (surr.)	69	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	D3-N-MeFOSA (surr.)	74	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	D7-N-MeFOSE (surr.)	29	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	D9-N-EtFOSE (surr.)	29	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	13C2-4:2 FTSA (surr.)	74	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	13C2-6:2 FTSA (surr.)	133	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	13C2-8:2 FTSA (surr.)	175	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	13C2-PFTeDA (surr.)	65	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	13C4-PFBA (surr.)	59	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	13C5-PFHxA (surr.)	71	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	13C5-PFPeA (surr.)	73	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	13C8-FOSA (surr.)	65	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	4-Bromofluorobenzene (surr.)	67	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	Phenol-d6 (surr.)	42	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	Tetrachloro-m-xylene (surr.)	-999	%	70	130	INT
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	Toluene-d8 (surr.)	66	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW08	24/06/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	13C2-6:2 FTSA (surr.)	165	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	13C2-8:2 FTSA (surr.)	184	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	13C2-PFTeDA (surr.)	54	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	13C4-PFBA (surr.)	65	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	13C8-FOSA (surr.)	65	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	2.4.6-Tribromophenol (surr.)	112	%	0	0	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	4-Bromofluorobenzene (surr.)	68	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	Tetrachloro-m-xylene (surr.)	147	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	Toluene-d8 (surr.)	70	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	D3-N-MeFOSA (surr.)	73	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	D3-N-MeFOSAA (surr.)	71	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	D5-N-EtFOSA (surr.)	69	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	D7-N-MeFOSE (surr.)	20	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	D9-N-EtFOSE (surr.)	20	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	Nitrobenzene-d5 (surr.)	138	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW09	24/06/2022	p-Terphenyl-d14 (surr.)	149	%	30	130	
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	13C2-6:2 FTSA (surr.)	182	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	13C2-8:2 FTSA (surr.)	-999	%	20	130	INT
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	13C2-PFTeDA (surr.)	62	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	13C4-PFBA (surr.)	61	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	13C8-FOSA (surr.)	61	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	2-Fluorobiphenyl (surr.)	-999	%	30	130	INT
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	2.4.6-Tribromophenol (surr.)	52	%	0	0	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	4-Bromofluorobenzene (surr.)	68	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	D7-N-MeFOSE (surr.)	26	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	D9-N-EtFOSE (surr.)	26	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	Phenol-d6 (surr.)	53	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	Toluene-d8 (surr.)	68	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW10	24/06/2022	Triphenylphosphate (surr.)	-999	%	70	130	INT
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	13C2-10:2 FTSA (surr.)	71	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	13C2-4:2 FTSA (surr.)	32	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	13C2-6:2 FTSA (surr.)	67	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	13C2-PFTeDA (surr.)	57	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	13C4-PFBA (surr.)	56	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	13C4-PFHpA (surr.)	69	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	13C5-PFHxA (surr.)	57	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	13C5-PFPeA (surr.)	60	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	13C8-FOSA (surr.)	60	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	2-Fluorobiphenyl (surr.)	65	%	30	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	2.4.6-Tribromophenol (surr.)	59	%	0	0	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	4-Bromofluorobenzene (surr.)	66	%	50	150	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	D3-N-MeFOSAA (surr.)	74	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	D7-N-MeFOSE (surr.)	23	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	D9-N-EtFOSE (surr.)	23	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	Dibutylchlorendate (surr.)	134	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	Phenol-d6 (surr.)	74	%	20	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	Toluene-d8 (surr.)	67	%	70	130	
24 Jun 2022	900799	Normal	WATER	MW11	24/06/2022	Triphenylphosphate (surr.)	61	%	70	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	13C2-6:2 FTSA (surr.)	149	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	13C2-8:2 FTSA (surr.)	186	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	13C2-PFTeDA (surr.)	65	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	13C4-PFBA (surr.)	54	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	13C5-PFHxA (surr.)	65	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	13C5-PFPeA (surr.)	67	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	13C8-FOSA (surr.)	54	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	2.4.6-Tribromophenol (surr.)	-999	%	0	0	INT
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	4-Bromofluorobenzene (surr.)	73	%	50	150	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	D3-N-MeFOSA (surr.)	71	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	D3-N-MeFOSAA (surr.)	73	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	D7-N-MeFOSE (surr.)	27	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	D9-N-EtFOSE (surr.)	27	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	Dibutylchlorendate (surr.)	-999	%	70	130	INT
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	Nitrobenzene-d5 (surr.)	-999	%	70	130	INT
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	p-Terphenyl-d14 (surr.)	-999	%	30	130	INT
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	Phenol-d6 (surr.)	-999	%	20	130	INT
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	Tetrachloro-m-xylene (surr.)	141	%	70	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	Toluene-d8 (surr.)	73	%	70	130	
24 Jun 2022	900799	Field_D	WATER	D01_20220624	24/06/2022	Triphenylphosphate (surr.)	129	%	70	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C2-10:2 FTSA (surr.)	46	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C2-4:2 FTSA (surr.)	19	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C2-6:2 FTSA (surr.)	32	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C2-8:2 FTSA (surr.)	46	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C2-PFDoDA (surr.)	24	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C2-PFTeDA (surr.)	12	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C2-PFUnDA (surr.)	24	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C3-PFBS (surr.)	65	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C4-PFBA (surr.)	60	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C4-PFHpA (surr.)	57	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C5-PFHxA (surr.)	56	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C5-PFNA (surr.)	56	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C5-PFPeA (surr.)	64	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C6-PFDA (surr.)	36	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C8-FOSA (surr.)	32	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C8-PFOA (surr.)	61	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	D3-N-MeFOSA (surr.)	23	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	D3-N-MeFOSAA (surr.)	29	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	D5-N-EtFOSA (surr.)	26	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	D7-N-MeFOSE (surr.)	11	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	D9-N-EtFOSE (surr.)	11	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	13C8-PFOS (surr.)	43	%	20	130	
24 Jun 2022	900799	Field_D	WATER	D02_20220624	24/06/2022	D5-N-EtFOSAA (surr.)	27	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	13C2-4:2 FTSA (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	13C3-PFBS (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	13C4-PFBA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	13C4-PFHpA (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	13C5-PFHxA (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	13C5-PFPeA (surr.)	66	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	13C8-FOSA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	13C8-PFOA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	18O2-PFHxS (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	D3-N-MeFOSA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	D3-N-MeFOSAA (surr.)	131	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	D5-N-EtFOSA (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	D7-N-MeFOSE (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED1	21/06/2022	13C8-PFOS (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	13C3-PFBS (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	13C4-PFBA (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	13C4-PFHpA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	13C5-PFHxA (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	13C5-PFPeA (surr.)	65	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	13C8-FOSA (surr.)	67	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	13C8-PFOA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	18O2-PFHxS (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	D3-N-MeFOSA (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	D5-N-EtFOSA (surr.)	64	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	D7-N-MeFOSE (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED2	21/06/2022	D9-N-EtFOSE (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	13C2-PFDoDA (surr.)	64	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	13C2-PFTeDA (surr.)	39	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	13C4-PFBA (surr.)	66	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	13C4-PFHpA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	13C5-PFHxA (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	13C5-PFPeA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	13C8-FOSA (surr.)	55	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	13C8-PFOA (surr.)	63	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	18O2-PFHxS (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	D3-N-MeFOSA (surr.)	57	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	D5-N-EtFOSA (surr.)	57	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	D7-N-MeFOSE (surr.)	57	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED3	21/06/2022	D9-N-EtFOSE (surr.)	58	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	13C3-PFBS (surr.)	65	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	13C4-PFBA (surr.)	63	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	13C4-PFHpA (surr.)	61	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	13C5-PFHxA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	13C5-PFNA (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	13C5-PFPeA (surr.)	62	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	13C8-FOSA (surr.)	63	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	13C8-PFOA (surr.)	66	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	18O2-PFHxS (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	D3-N-MeFOSA (surr.)	63	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	D5-N-EtFOSA (surr.)	60	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	D7-N-MeFOSE (surr.)	63	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	D9-N-EtFOSE (surr.)	67	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED4	21/06/2022	13C8-PFOS (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	13C4-PFBA (surr.)	58	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	13C4-PFHpA (surr.)	65	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	13C5-PFHxA (surr.)	66	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	13C5-PFPeA (surr.)	65	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	13C8-PFOA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	18O2-PFHxS (surr.)	73	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	D3-N-MeFOSA (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	D3-N-MeFOSAA (surr.)	131	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	D5-N-EtFOSA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	D7-N-MeFOSE (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED5	21/06/2022	D9-N-EtFOSE (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	13C3-PFBS (surr.)	73	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	13C4-PFBA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	13C4-PFHpA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	13C5-PFHxA (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	13C5-PFPeA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	13C8-FOSA (surr.)	66	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	13C8-PFOA (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	18O2-PFHxS (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	D3-N-MeFOSA (surr.)	62	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	D3-N-MeFOSAA (surr.)	126	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	D5-N-EtFOSA (surr.)	59	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	D7-N-MeFOSE (surr.)	62	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED6	21/06/2022	D9-N-EtFOSE (surr.)	60	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	13C2-10:2 FTSA (surr.)	57	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	13C4-PFBA (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	13C4-PFHpA (surr.)	66	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	13C5-PFHxA (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	13C5-PFPeA (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	13C8-FOSA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	13C8-PFOA (surr.)	73	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	18O2-PFHxS (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	D3-N-MeFOSA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	D5-N-EtFOSA (surr.)	63	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	D7-N-MeFOSE (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED7	21/06/2022	D9-N-EtFOSE (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	13C2-10:2 FTSA (surr.)	34	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	13C2-4:2 FTSA (surr.)	139	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	13C2-6:2 FTSA (surr.)	127	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	13C2-PFDoDA (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	13C2-PFTeDA (surr.)	37	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	13C2-PFUnDA (surr.)	73	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	13C4-PFBA (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	13C4-PFHpA (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	13C8-FOSA (surr.)	54	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	18O2-PFHxS (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	D3-N-MeFOSA (surr.)	59	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	D3-N-MeFOSAA (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	D5-N-EtFOSA (surr.)	54	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	D7-N-MeFOSE (surr.)	59	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED8	21/06/2022	D9-N-EtFOSE (surr.)	59	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	13C3-PFBS (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	13C4-PFBA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	13C4-PFHpA (surr.)	66	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	13C5-PFHxA (surr.)	73	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	13C5-PFPeA (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	13C8-FOSA (surr.)	67	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	D3-N-MeFOSA (surr.)	67	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	D3-N-MeFOSAA (surr.)	127	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	D5-N-EtFOSA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	D7-N-MeFOSE (surr.)	67	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	D9-N-EtFOSE (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED9	21/06/2022	13C8-PFOS (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	13C3-PFBS (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	13C4-PFHpA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	13C5-PFPeA (surr.)	67	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	13C8-FOSA (surr.)	67	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	13C8-PFOA (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	18O2-PFHxS (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	D3-N-MeFOSA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	D3-N-MeFOSAA (surr.)	133	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	D5-N-EtFOSA (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	D7-N-MeFOSE (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	D9-N-EtFOSE (surr.)	65	%	20	130	
22 Jun 2022	900392	Normal	SOIL	SED10	21/06/2022	13C8-PFOS (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	13C2-6:2 FTSA (surr.)	133	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	13C2-8:2 FTSA (surr.)	133	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	13C2-PFUnDA (surr.)	142	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	13C3-PFBS (surr.)	127	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	13C4-PFHpA (surr.)	143	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	13C5-PFNA (surr.)	149	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	13C6-PFDA (surr.)	135	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	13C8-PFOA (surr.)	156	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	2-Fluorobiphenyl (surr.)	55	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	4-Bromofluorobenzene (surr.)	74	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	D3-N-MeFOSA (surr.)	52	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	D5-N-EtFOSA (surr.)	49	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	D7-N-MeFOSE (surr.)	52	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	D9-N-EtFOSE (surr.)	50	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	Dibutylchlorendate (surr.)	62	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	Nitrobenzene-d5 (surr.)	72	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	Phenol-d6 (surr.)	37	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW1	21/06/2022	Triphenylphosphate (surr.)	59	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	13C2-6:2 FTSA (surr.)	145	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	13C2-PFTeDA (surr.)	66	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	13C2-PFUnDA (surr.)	131	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	13C4-PFBA (surr.)	61	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	13C5-PFNA (surr.)	138	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	13C5-PFPeA (surr.)	63	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	13C8-PFOA (surr.)	139	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	2-Fluorobiphenyl (surr.)	55	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	2.4.6-Tribromophenol (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	4-Bromofluorobenzene (surr.)	67	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	D3-N-MeFOSA (surr.)	39	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	D5-N-EtFOSA (surr.)	37	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	D7-N-MeFOSE (surr.)	39	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	D9-N-EtFOSE (surr.)	34	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	Dibutylchlorendate (surr.)	65	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	Nitrobenzene-d5 (surr.)	51	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	Phenol-d6 (surr.)	33	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	Toluene-d8 (surr.)	69	%	70	130	
22 Jun 2022	900392	Normal	WATER	SW2	21/06/2022	Triphenylphosphate (surr.)	64	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	13C2-10:2 FTSA (surr.)	64	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	13C2-4:2 FTSA (surr.)	67	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	13C2-PFDoDA (surr.)	60	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	13C2-PFTeDA (surr.)	57	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	13C4-PFBA (surr.)	57	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	13C5-PFPeA (surr.)	58	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	13C8-FOSA (surr.)	69	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	13C8-PFOA (surr.)	131	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	4-Bromofluorobenzene (surr.)	73	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	D3-N-MeFOSA (surr.)	31	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	D3-N-MeFOSAA (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	D5-N-EtFOSA (surr.)	28	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	D7-N-MeFOSE (surr.)	31	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	D9-N-EtFOSE (surr.)	26	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	Nitrobenzene-d5 (surr.)	57	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	p-Terphenyl-d14 (surr.)	72	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	Phenol-d6 (surr.)	36	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	Tetrachloro-m-xylene (surr.)	72	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW4	21/06/2022	Triphenylphosphate (surr.)	53	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	13C2-PFDoDA (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	13C2-PFTeDA (surr.)	61	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	13C4-PFBA (surr.)	49	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	13C5-PFHxA (surr.)	67	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	13C5-PFPeA (surr.)	45	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	13C8-FOSA (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	4-Bromofluorobenzene (surr.)	67	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	D3-N-MeFOSA (surr.)	38	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	D5-N-EtFOSA (surr.)	34	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	D7-N-MeFOSE (surr.)	38	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	D9-N-EtFOSE (surr.)	37	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	Dibutylchlorendate (surr.)	70	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	Nitrobenzene-d5 (surr.)	70	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	Phenol-d6 (surr.)	42	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	Toluene-d8 (surr.)	68	%	70	130	
22 Jun 2022	900392	Normal	WATER	SW5	21/06/2022	Triphenylphosphate (surr.)	65	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	13C2-4:2 FTSA (surr.)	73	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	13C2-PFDoDA (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	13C2-PFTeDA (surr.)	59	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	13C4-PFBA (surr.)	56	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	13C5-PFNA (surr.)	127	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	13C5-PFPeA (surr.)	54	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	13C8-FOSA (surr.)	61	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	2-Fluorobiphenyl (surr.)	63	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	2.4.6-Tribromophenol (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	4-Bromofluorobenzene (surr.)	68	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	D3-N-MeFOSA (surr.)	35	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	D5-N-EtFOSA (surr.)	32	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	D7-N-MeFOSE (surr.)	35	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	D9-N-EtFOSE (surr.)	35	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	Dibutylchlorendate (surr.)	55	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	Nitrobenzene-d5 (surr.)	55	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	p-Terphenyl-d14 (surr.)	69	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	Phenol-d6 (surr.)	34	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	Tetrachloro-m-xylene (surr.)	64	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	Toluene-d8 (surr.)	67	%	70	130	
22 Jun 2022	900392	Normal	WATER	SW6	21/06/2022	Triphenylphosphate (surr.)	51	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	13C2-4:2 FTSA (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	13C2-PFTeDA (surr.)	54	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	13C2-PFUnDA (surr.)	126	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	13C4-PFBA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	13C5-PFPeA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	13C8-FOSA (surr.)	66	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	13C8-PFOA (surr.)	127	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	4-Bromofluorobenzene (surr.)	72	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	D3-N-MeFOSA (surr.)	44	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	D5-N-EtFOSA (surr.)	40	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	D7-N-MeFOSE (surr.)	44	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	D9-N-EtFOSE (surr.)	41	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	Dibutylchlorendate (surr.)	53	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	Nitrobenzene-d5 (surr.)	55	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	p-Terphenyl-d14 (surr.)	65	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	Phenol-d6 (surr.)	32	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	Tetrachloro-m-xylene (surr.)	73	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	Toluene-d8 (surr.)	72	%	70	130	
22 Jun 2022	900392	Normal	WATER	SW7	21/06/2022	Triphenylphosphate (surr.)	52	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	13C2-4:2 FTSA (surr.)	74	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	13C2-PFDoDA (surr.)	71	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	13C2-PFTeDA (surr.)	62	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	13C4-PFBA (surr.)	64	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	13C5-PFHxA (surr.)	73	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	13C5-PFPeA (surr.)	56	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	13C8-FOSA (surr.)	73	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	4-Bromofluorobenzene (surr.)	72	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	D3-N-MeFOSA (surr.)	41	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	D5-N-EtFOSA (surr.)	36	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	D7-N-MeFOSE (surr.)	41	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	D9-N-EtFOSE (surr.)	36	%	20	130	

SDG	Lab_Report_Number	Matrix_Type	Sampled_Date-Time	Method_Name	Compound	Recovery %	Result_Type	LCL	UCL	UCL	Lab_Comments
22 Jun 2022	900392	Normal	WATER	SW8	21/06/2022	Triphenylphosphate (surr.)	70	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	13C4-PFBA (surr.)	68	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	13C5-PFNA (surr.)	129	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	13C5-PFPeA (surr.)	70	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	13C8-PFOA (surr.)	137	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	4-Bromofluorobenzene (surr.)	68	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	D3-N-MeFOSA (surr.)	43	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	D5-N-EtFOSA (surr.)	40	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	D7-N-MeFOSE (surr.)	43	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	D9-N-EtFOSE (surr.)	41	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	p-Terphenyl-d14 (surr.)	52	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	Phenol-d6 (surr.)	26	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	Tetrachloro-m-xylene (surr.)	60	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW9	21/06/2022	Toluene-d8 (surr.)	69	%	70	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	13C2-PFTeDA (surr.)	58	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	13C4-PFHpA (surr.)	127	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	13C5-PFNA (surr.)	131	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	13C5-PFPeA (surr.)	72	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	13C8-PFOA (surr.)	135	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	4-Bromofluorobenzene (surr.)	68	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	D3-N-MeFOSA (surr.)	39	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	D5-N-EtFOSA (surr.)	37	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	D7-N-MeFOSE (surr.)	39	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	D9-N-EtFOSE (surr.)	36	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	p-Terphenyl-d14 (surr.)	61	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	Phenol-d6 (surr.)	30	%	20	130	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	Tetrachloro-m-xylene (surr.)	66	%	50	150	
22 Jun 2022	900392	Normal	WATER	SW10	21/06/2022	Toluene-d8 (surr.)	67	%	70	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	13C2-6:2 FTSA (surr.)	133	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	13C2-PFDoDA (surr.)	71	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	13C2-PFTeDA (surr.)	60	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	13C4-PFBA (surr.)	61	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	13C5-PFNA (surr.)	128	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	13C5-PFPeA (surr.)	61	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	13C8-FOSA (surr.)	73	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	13C8-PFOA (surr.)	135	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	4-Bromofluorobenzene (surr.)	71	%	50	150	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	D3-N-MeFOSA (surr.)	34	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	D5-N-EtFOSA (surr.)	29	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	D7-N-MeFOSE (surr.)	34	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	D9-N-EtFOSE (surr.)	29	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	Dibutylchlorendate (surr.)	56	%	50	150	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	Nitrobenzene-d5 (surr.)	62	%	50	150	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	Phenol-d6 (surr.)	39	%	20	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	Toluene-d8 (surr.)	74	%	70	130	
22 Jun 2022	900392	Field_D	WATER	D01_20220621	21/06/2022	Triphenylphosphate (surr.)	58	%	50	150	
22 Jun 2022	900392	Field_D	SOIL	D01_20220621	21/06/2022	13C4-PFBA (surr.)	73	%	20	130	
22 Jun 2022	900392	Field_D	SOIL	D01_20220621	21/06/2022	13C4-PFHpA (surr.)	70	%	20	130	
22 Jun 2022	900392	Field_D	SOIL	D01_20220621	21/06/2022	13C5-PFHxA (surr.)	73	%	20	130	
22 Jun 2022	900392	Field_D	SOIL	D01_20220621	21/06/2022	13C5-PFPeA (surr.)	71	%	20	130	
22 Jun 2022	900392	Field_D	SOIL	D01_20220621	21/06/2022	13C8-FOSA (surr.)	68	%	20	130	
22 Jun 2022	900392	Field_D	SOIL	D01_20220621	21/06/2022	13C8-PFOA (surr.)	74	%	20	130	
22 Jun 2022	900392	Field_D	SOIL	D01_20220621	21/06/2022	D3-N-MeFOSA (surr.)	68	%	20	130	
22 Jun 2022	900392	Field_D	SOIL	D01_20220621	21/06/2022	D5-N-EtFOSA (surr.)	62	%	20	130	
22 Jun 2022	900392	Field_D	SOIL	D01_20220621	21/06/2022	D7-N-MeFOSE (surr.)	68	%	20	130	
22 Jun 2022	900392	Field_D	SOIL	D01_20220621	21/06/2022	D9-N-EtFOSE (surr.)	68	%	20	130	

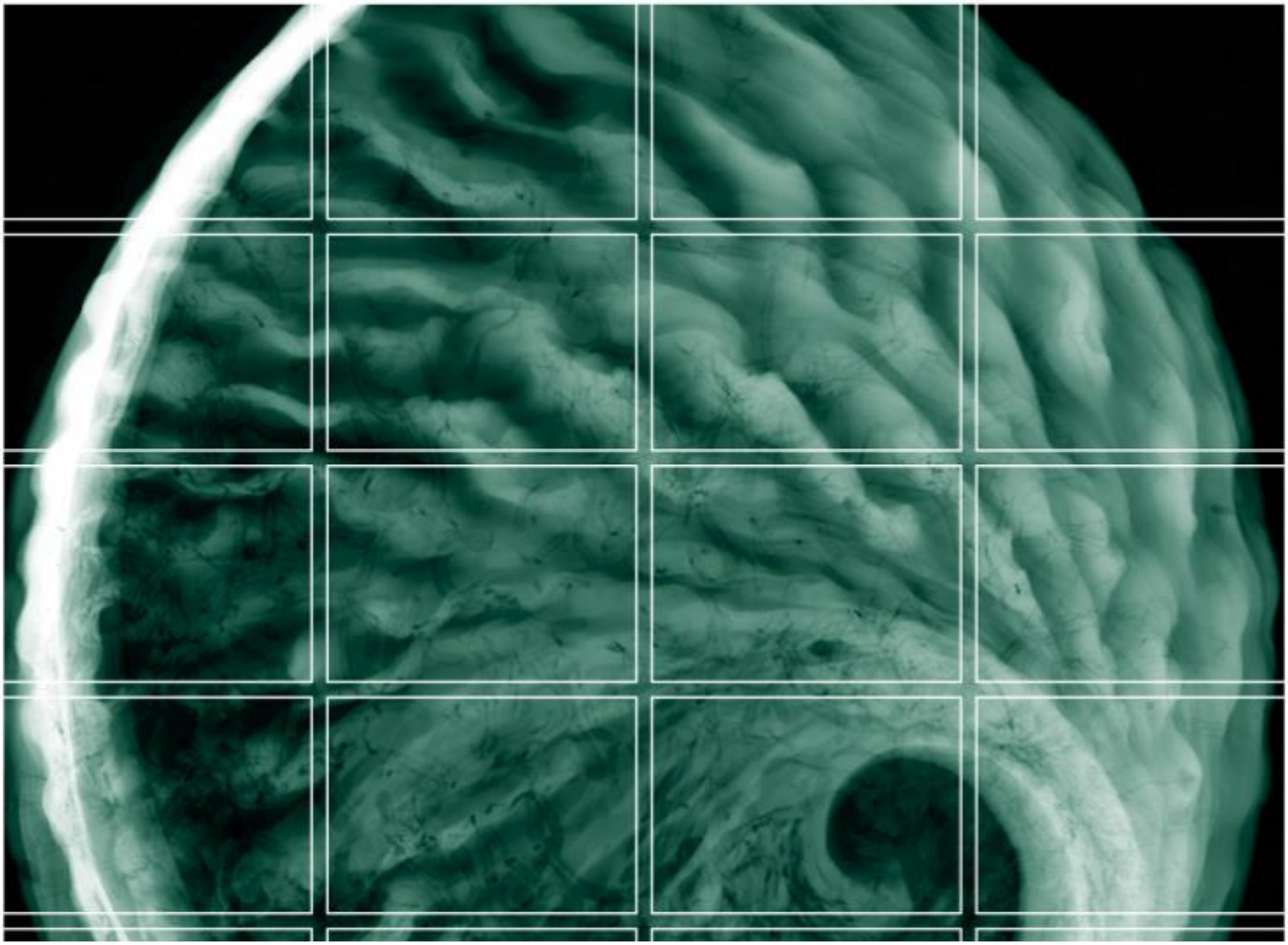
Sample ID	Comments
SED1	CLAY sediments, Brown, no odour.
SED2	CLAY, light brown, no odour.
SED3	TOPSOIL, silty clay, dark brown, moderate plasticity, damp, no overlying water present.
SED4	CLAY, red-brown. No odour.
SED5	SILTY CLAY. Grey-brown, fine sediment with swamp odour.
SED6	CLAY, light brown, no odour.
SED7	SILTY CLAY, brown, No odour
SED8	SILTY CLAY, light brown, no odour.
SED9	SILTY CLAY. Light brown, no odour.
SED10	CLAY. Grey, fine, no odour.

Sample ID	DO (mg/L)	EC (µScm-¹)	Eh (mV)	Temp. (°C)	Comments
SW1	0.50	293.1	49.2	10.7	Minor brown sediments, brown-tinged water, no odour. Algal sheen.
SW2	4.73	209.7	87.9	10.3	Slightly cloudy, white, no odour.
SW3	--	--	--	--	Dry, no sample collected
SW4	1.24	720	-78.4	14.4	Clear, red-brown tinge. No odour.
SW5	1.52	1605	-18.8	12.5	Slight brown tinge, brown sediment and algae particulates. Swamp odour.
SW6	5.50	229	85.5	10.3	Cloudy white, no odour.
SW7	30.00	78	207.9	10.9	brown, turbid.
SW8	14.03	413	165.0	13.3	Clear, colourless, odourless, green algae present.
SW9	4.00	638	18.6	12.9	Light brown, slightly turbid water, no odour.
SW10	6.17	351	65.9	12.1	Cloudy white, no odour.

Notes:

DO	Dissolved Oxygen	YSI-20M101183
mg/L	milligrams per litre	
EC	Electrical Conductivity	
μScm^{-1}	microsiemens per centimetre	Jack Emblen / Indiana Strachan
Eh	Redox	
mV	millivolts	
L	Litres	

Appendix F Asbestos Management Plan (ERM 2022b)



Asbestos Management Plan

Bradfield City Centre

8 November 2022

Project No.: 0571466

The business of sustainability

Document details	
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8 November 2022

Asbestos Management Plan

Bradfield City Centre

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Acronyms and Abbreviations

Acronym	Definition
ACT	Australian Capital Territory
AHD	Australian Height Datum
AMG	Australian Map Grid
ANZECC	Australian and New Zealand Environment and Conservation Council
CoPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
EPA	Environment Protection Authority
ESL	Ecological Screening Level
LAA	Licensed Asbestos Assessor
LOR	Limit of Reporting
m	Metre
m^3	Cubic Metres
m AHD	Metres Australian Height Datum
m bgl	Metres Below Ground Level
MGA	Map Grid of Australia
MPC	Major Projects Canberra
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
PID	Photo-Ionisation Detector
QA	Quality Assurance
QC	Quality Control
RAP	Remedial Action Plan
RPD	Relative Percentage Difference
SAQP	Sampling Analysis and Quality Plan
WPCA	Western Parkland City Authority

EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by the Western Parkland City Authority (WPCA, or 'the Client') to develop an Asbestos Management Plan (AMP) for the Site identified as the Bradfield Development Area, located at 215 Badgerys Creek Road, Bringelly NSW (the Site).

Asbestos Containing Material (ACM) was reported to have been previously identified during investigations undertaken by Golder Associates in 2011 within a portion of the Site identified as the "former married quarters" (Appendix A – Figure 2). ERM notes that field observations and laboratory analysis undertaken during recent investigations undertaken by Western Environmental in 2019 and ERM in 2022 did not identify evidence of asbestos impacts within the Site, including within the former married quarters.

Given the extensive sampling undertaken throughout the Site as part of previous investigations, it is anticipated that any unexpected finds of ACM that might be identified during future works would be limited to isolated pockets of ACM within surface fill soils or ACM within service pits and conduits on the Site.

The specific objectives of this AMP are therefore to:

- Summarise background environmental information and possible or likely conditions at the Site;
- Document the current status of the Site regarding previously identified ACM impact;
- Provide procedures for asbestos removal, should ACM be encountered during Site works;
- Provide criteria for asbestos clearance/validation should ACM removal occur during works;
- Provide Asbestos Clearance/Validation procedures to be followed should ACM removal works occur;
- Discuss safety measures / considerations for dealing with potentially contaminated soil / fill material; and
- Provide general environmental requirements for undertaking works within the Site.

All work related to the excavation, movement, handling and disposal of any unexpected finds of ACM should be undertaken in accordance with the requirements of this AMP and in compliance with relevant legislation detailed within **Section 3**.

Potential Residual Contamination at the Site

The Site in its current form poses a low risk of harm to human health and / or sensitive environmental receptors. This AMP has been prepared to manage the risk from potential unexpected finds of ACM.

Asbestos Management Requirements

Any works undertaken within the Site involving the management of unexpected finds of ACM impacted fill materials are to be undertaken in accordance with this AMP.

The primary control measure for the management of potential ACM contamination within the Site is ensuring that all potentially ACM contaminated fill materials located within the Site are appropriately disposed offsite or managed within onsite containment areas.

ERM notes that where ACM impacted fill is identified, upon completion of offsite disposal / onsite containment a validation report is required to be prepared by a suitably qualified environmental professional and reviewed / endorsed by the nominated NSW EPA accredited Site Auditor.

1. INTRODUCTION AND OBJECTIVES

1.1 Introduction

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by the Western Parkland City Authority (WPCA, or 'the Client') to develop an Asbestos Management Plan (AMP) for the Site identified as the Bradfield Development Area, located at 215 Badgerys Creek Road, Bringelly NSW (the Site – refer to Figure 1 of Appendix A).

Asbestos Containing Material (ACM) was previously reported in an investigation undertaken by Golder Associates in 2011 in a portion of the Site identified as the "former married quarters" (Figure 2 of Appendix A). ERM notes that field observations and laboratory analysis undertaken during two more recent investigations by Western Environmental in 2019 and ERM in 2022 did not identify evidence of asbestos impacts within the Site, including within the former married quarters.

- The most likely remediation option for any unexpected finds of ACM identified during the development of the Site will be excavation and offsite disposal, as it is envisioned that any unexpected finds will be small in volume.
- While significant volume of ACM impacted soils are considered unlikely, where large volumes of ACM impacted fill are identified during construction works that would result in significant costs for offsite disposal the potential for **onsite containment of impacted soils may be considered**.
- It is noted that at the time of this AMP, the final site layout / design levels had not been finalised and as such, the location, design etc. for a potential containment cell would be developed at a later time. It is further noted that where onsite containment is required, the specific location, suitably of materials and containment cell design would require review and approval by a NSW EPA accredited Site Auditor.

1.2 Objectives

The specific objectives of this AMP are to:

- Summarise background environmental information and possible or likely conditions at the Site;
- Document the current status of the Site regarding previously identified ACM impact;
- Provide procedures for asbestos removal, should ACM be encountered during Site works;
- Provide criteria for asbestos clearance/validation should ACM removal occur during works;
- Provide Asbestos Clearance/Validation procedures to be followed should ACM removal works occur;
- Discuss safety measures / considerations for dealing with potentially contaminated soil / fill material; and
- Provide general environmental requirements for undertaking works within the Site.

1.3 AMP Revision

WPCA is responsible for ensuring that all required stakeholders are provided with the current revision of this AMP. The current revision of this AMP is detailed within the table below. Updates to this document must be undertaken in accordance with the requirements detailed within **Section2.3**.

- WPCA is responsible for any subsequent revisions of this AMP. All subsequent revisions must include a clear date / revision identifier and details of the revisions to ensure the most current version of the AMP is implemented.

Document Name	Document Revision Number	Date
Asbestos Management Plan – Bradfield City Centre	Revision 2	18/10/2022

2. APPLICATION AND RESPONIBILITIES

2.1 Application of AMP

Due to the potential for ACM to be present both within underlying soils and on the Site surface, the AMP has been developed to provide ongoing management of potential asbestos contamination within the Site and will be applied immediately upon the initiation of any works within the Site, which may involve the following activities:

- Excavation of fill and natural soil materials to facilitate maintenance, realignment and construction of any subsurface infrastructure;
- Construction of any subsurface site infrastructure;
- Temporary stockpiling of excavated material resulting from onsite intrusive works;
- Off-site disposal of any waste soil / fill materials (if required); and
- Any other forms of soil / ground disturbance that may disturb or encounter ACM at or beneath the soil surface.

2.2 Responsibilities

The responsibilities for the measures outlined within this AMP are details below.

Position and Company	Responsibilities
Site Auditor	■ Approve the AMP. ■ Review and approval of any subsequent revisions of the AMP
Land Custodian	■ Implement this AMP. ■ Require all contractors and sub-contractors comply with the AMP and statutory and license requirements.
Site Superintendent (if required)	■ Maintain records of all works undertaken within the Site as required within this AMP ■ Provide all required information relating to soil disposal to the Land Custodian.
Site Contractor	■ Implement this AMP.
	■ Ensure all personnel are inducted into the requirements of this AMP.
	■ Where required, engage a suitably qualified environmental specialist (or professional) and / or occupational hygienist / Licenced Asbestos Assessor (LAA) to undertake sample collection, reporting and other works designated within this AMP.
	■ Oversee overall implementation of AMP and undertake monitoring and inspections of the Site as required.
	■ As required, undertake site inspections and monitoring of the Site operations to ensure they are carried out in an environmentally responsible manner.
	■ Monitor the environmental protection measures put in place to assess if they are appropriate and functioning properly.
	■ Assess any unexpected finds.
	■ Notify the land custodian and / or superintendent of any significant environmental issues.
	■ Notify the Land Custodian of any significant environmental issues
	■ Comply with the relevant conditions of the consents and licenses (i.e. comply with all regulatory requirements).
	■ Complete all necessary registers, databases, and records required in the AMP.

Position and Company	Responsibilities
	■ Conduct all site operations in an environmentally responsible manner on a day to day basis.
	■ Meet all OH&S regulatory requirements.
	■ Provide adequate training of all employees and contractors during site induction, and as required on an ongoing basis during the works.
	■ Complete non-conformance and corrective action reports, and follow up as required.
	■ Complete incident reports and complaint reports, and follow up as required.
	■ Conduct monitoring as required in the AMP.
	■ Undertake audits of the project activities in accordance with the requirements of the AMP.
	■ Ensure all non-conformance and/or complaints are reported to the Superintendent.
Licensed Asbestos Removalist	■ An entity licensed to carry out Class A or Class B asbestos removal work in NSW.
Environmental Consultant	■ The entity engaged to assess the Site for contamination and, where required, to develop a remediation plan, implement the plan and validate the remediation.
Competent Person	■ A person who has acquired through training, qualification or experience, the knowledge and skills related asbestos removal industry practice to carry out clearance inspections of asbestos removal areas. ■ An independent competent person is required to conduct asbestos clearance inspections for bonded asbestos removal works.
Licensed Asbestos Assessor	■ An independent Licensed Asbestos Assessor is required to conduct asbestos clearance inspections for friable asbestos removal works. ■ A Licensed Asbestos Assessor is also considered to be a Competent Person for the purposed of bonded asbestos clearance inspections.

2.3 Document Revision

This AMP may be regularly reviewed and updated as necessary. Therefore, it is the responsibility of the reader of this document to ensure they have the current version of the AMP.

Where onsite works vary from expected or where inspections / audits (identify that the AMP requires updating, a suitably qualified environmental specialist (or professional) will update the AMP as required.

- ERM notes that where the AMP requires updating, all changes / amendments must be undertaken by a suitably qualified environmental specialist (or professional) and approved / endorsed by an NSW EPA approved Site Auditor prior to implementation.

The master document, with the up-to-date version of the AMP will be available from WPCA.

3. STATUTORY REQUIREMENTS

During the course of works, all works within the Site shall comply with the applicable environmental and occupational health and safety (OH&S) regulatory requirements in the New South Wales (NSW) at the time of work, and in particularly to those related to asbestos and asbestos management.

3.1 Legislation and Codes of Practice

Asbestos exposure, both personal and to the environment is covered generally by the requirements of SafeWork NSW Codes of Practices and NOHSC Guidance Notes: The guidelines most relevant to this AMP are:

- Code of Practice: How to Safely Remove Asbestos (SafeWork NSW, 2019);
- Code of Practice: How to Manage and Control Asbestos in the Workplace (SafeWork NSW, 2019); and
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres (NOHSC:3003 (2005)).

Other relevant regulatory guidelines relevant to the assessment and disposal of ACM impacted fill and potential site suitability requirements for the Site include:

- Australian Standard (2005). AS 4482.1 2005, Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 2: Non-volatile and Semi-volatile compounds;
- Australian Standard (1999). AS 4482.2 1999, Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances;
- National Environment Protection Council (2013). National Environment Protection (Assessment of Site Contamination) Measure 1999. This is hereafter referred to as ‘the ASC NEPM;
- WA Department of Health (2021). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia;
- NSW EPA (2017) Guidelines for the NSW Site Auditor Scheme (3rd edition); and
- NSW EPA (2020) Consultants reporting on contaminated land, contaminated land guidelines.

Other relevant legislation guidelines relevant to the assessment and disposal of ACM impacted fill and potential site suitability requirements for the Site include:

- NSW WHS Act 2011;
- NSW WHS Regulation 2017;
- Environmentally Hazardous Chemicals Regulation 1999;
- Protection of the Environment Operations (Waste) Regulation 2005;
- Protection of the Environment Operations Act 1997;
- Protection of the Environment Operations (General) Regulation 2009;
- Protection of the Environment Operations (Waste) Regulation 2014;
- Contaminated Land Management Act 1997; and
- State Environmental Planning Policy (Resilience and Hazards) 2021.

ERM notes that in response to the WA Department of Health (2021). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, the NSW EPA issued a position statement that the processes and procedures for assessment, management and remediation of ACM impacted fill materials is considered to not be wholly consistent with the position of the NSW EPA.

ERM notes that in the event that unexpected fids of asbestos were made and remediation of ACM impacted fill was subsequently required to be undertaken within the Site, all works must be undertaken in accordance with the above regulations / guidelines made or endorsed by the NSW EPA or updated approved guidance at the time of those works.

3.2 Definitions

Definitions regarding the friable or bonded nature of ACM is provided within the *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW 2019). The definitions for friable and non-friable asbestos provided in that document are as follows:

- **Friable Asbestos**: Material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos; and,
- **Non-Friable Asbestos**: Material containing asbestos that is not friable asbestos, including material containing asbestos fibres reinforced with a bonding compound (also known as bonded asbestos).

The friable or bonded nature of asbestos fragment materials within the *National Environment Protection (Assessment of Site Contamination) Measure 1999*(NEPC, 2013) is defined as follows:

- **Bonded ACM (bonded Asbestos)**: Asbestos-containing-material which is in sound condition and where the asbestos is bound in a matrix such as cement or resin (e.g. asbestos fencing and vinyl tiles). Bonded ACM refers to, in this instance, material that cannot pass a mm x 7 mm sieve.
- **Fibrous Asbestos (FA)**: Friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This material is in a condition such that it can be broken or crumbled by hand pressure.
- **Asbestos Fines (AF)**: AF includes free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve.

4. SITE DESCRIPTION AND BACKGROUND INFORMATION

4.1 Site Identification

Site identification information is presented in **Table 1** below

Table 1: Site Identification Details

Item	Detail
Site Address	215 Badgerys Creek Rd, Bringelly NSW 2556
Lot and Deposited Plan	Part Lot 101 DP1282949
Local Government Authority	Liverpool City Council
Zoning	The majority of the Site is zoned as MU (Mixed Use) with the Southern and Eastern boundary of The Site zoned as ENZ (Environment and Recreation). The North Western portion of the Site is zoned as ENT (Enterprise) under the State Environmental Planning Policy (Precincts – Western Parkland City) 2021.
Site Area	Approximately 94.56 hectares (ha) (Excluding First building area and Sydney Metro site area and access roads)
Site Location	Refer to **Figure 1**
Site Layout	Refer to **Figure 2**

4.2 Site Setting

A summary of the Site setting, documented in the PSI and DSI is provided in **Table 2**.

Table 2: Site Identification Details

Item	Description
Historical and Current land-use	■ The Site forms part of the larger lot (Lot 101) acquired by the Commonwealth in 1959 for use as the Royal Australian Air Force (RAAF) Bringelly Radio Receiving Station. The Bringelly Radio Receiving Station closed in 2005. ■ The Site was acquired by WPCA from the Commonwealth in 2020. The buildings associated with the former Radio Receiving Station were demolished in works which took place during February and March of 2022. ERM notes that the former radio receiving station buildings were located within the central compound within the Sydney Metro site area and are excluded from this investigation.
Surrounding Land use	The land uses surrounding the Site include: ■ North: Directly north of the Site is agricultural land followed by low density/semi-rural residence (approximately 290 m north of the Site). Residential properties are located approximately 550 m north of the Site and beyond. The north western boundary of the Site forms part of the wider Bradfield City Centre land and is comprised of the area identified as Priority Area 1 which is subject to a separate investigation. ■ South: Directly south of the Site is a strip of vegetation followed by Thompsons Creek located approximately 40 m south of the Site. An area of rural residential housing lies beyond Thompsons Creek. ■ East: Thompsons Creek runs along the majority of the eastern border of the Site beyond which is The Retreat Road located approximately 115 m east of the Site. Residential properties are located approximately 150 m to the east of the Site and beyond. ■ West: Directly west of the Site are residential properties which extend for approximately 500 m and beyond. ERM notes that the central and northern portion of the proposed Bradfield City Centre is comprised of the Sydney Metro works area and excluded from this AMP.

Item	Description
Site Elevation	■ Based on topographical data obtained as part of an information search conducted during the PSI (ERM, 2021), the Site slopes generally to the east. ■ The highest elevation on site is approximately 78 m AHD on the western boundary of the Site. The lowest elevation is approximately 60 m AHD on the eastern boundary of the Site.
Topography	■ Topography within the surrounding area is variable with gentle/undulating slopes generally in a South Easterly direction.
Hydrology	■ The nearest surface water body to the Site is Moore Gully which crosses the western boundary of the Site and enters Thompsons Creek at the eastern boundary of the Site. ■ Five unnamed ephemeral drainage lines are indicated on Site mapping to flow through the Site and into Thompsons Creek to the South and East. ■ Thompsons Creek is a South Creek tributary with the confluence between the two creeks occurring approximately 1.3 km North-East of the Site.
Geology, Soils and Acid Sulfate Soils	■ The Penrith 1:100,000 Geological Mapping Sheet identifies the underlying geology as Bringelly Shale and is described as shale, carbonaceous claystone, claystone, laminite, fine to medium grained lithic sandstone, rare coal and tuff from the Middle Triassic age. ■ The soil landscape of the Site is described as ridge and valley country of gently undulating ridge tops and steep side slopes often with slumping and rounded hilly to steep hilly areas and relatively narrow valleys. Chief soils are hard acidic red soils (with hard acidic yellow mottled soils in places some ironstone gravels occur in both these soils. Associated are hard neutral and alkaline red soils and in saddles and some mid-slope positions soils, usually in depressions; and small areas of undescribed soils in wet soaks and valley areas. Small areas of other soils are likely throughout. This is consistent with site observations during the DSI where site soils were mostly noted to be red, grey and brown clays with minor shale inclusions, and finer tan / grey clays in low-lying areas near natural drainage lines. ■ According to the Atlas of Australian Acid Sulfate Soils (ASS), ASS onsite and within the search buffer have an extremely low probability of occurrence. There is a 1-5% chance of occurrence with occurrences in small, localised areas.
Hydrogeology	■ Previous investigations undertaken within the Site by ERM in 2021 identified groundwater at variable depths ranging from approximately 2.5 m bgl to 13 m bgl within underlying fractured shale bedrock (Bringelly Shale). ■ A search of registered groundwater bores identified five groundwater bores within the Site boundary. All bores were reported to be drilled for monitoring purposes. An additional eight registered groundwater bores are found within a 2km buffer zone from the Site. ■ Two of the bores within the buffer zone were reported to be drilled for domestic/stock purposes, three are reported to be drilled for monitoring purposes, one for domestic/industrial/stock purposes and one for domestic purposes. ■ Aquifers onsite and within the buffer area are described as porous, extensive aquifers of low to moderate productivity.

4.3 Previous Investigations

In developing this AMP, ERM undertook a review of the following previous investigations relating to asbestos contamination within the Site:

Detailed Site Investigation: Former RAAF Bringelly Receiving Station (Golder Associates, October 2011, Report No. 107623154 021 R RevA)

- ACM, as asbestos containing cement debris, was identified in the location of the former Married Quarters and in a soil stockpile to the South of the central compound area.
- The DSI reported that free asbestos fibres were not identified in the soil or stockpile samples analysed during the investigation.
- A suspected asbestos cement cable pit was observed on the eastern side of the Compound area.
- The DSI concluded there is a potential for asbestos cement debris to be present elsewhere on the Site.

***Detailed Site Investigation Report 215 Badgerys Creek Road, Bringelly, NSW:* (Western Environmental, 13th December 2019, Report No: P19.114-RPT-DSI_0)**

- The report stated that no surface ACM fragments were identified on the Site and the opportunity for future exposure was considered unlikely, however there was still a risk that ACM fragments may be present within surface and/or subsurface soils that may be revealed during Site works and/or via wind and water erosion.
- Results from 17 sampling locations demonstrated that asbestos concentrations did not exceed the adopted guideline value of 0.01% w/w for ACM or 0.001% w/w for asbestos fines (AF) or fibrous asbestos (FA).
- The report concluded that based on the proposed future land use for industrial/commercial and/or residential purposes, the risks associated with the presence of asbestos may be qualitatively considered to be very low and do not pose an unacceptable risk to future Site users.

ERM Detailed Site Investigation, Bradfield City Centre, 11th October 2022, Rev 04, Ref No 0571466

Results of the DSI indicated the following:

- Fill materials were generally found to be shallow, extending to depths of approximately 0.1 – 0.2 m below ground level (bgl) with the exception of TP92 (in which fill extended to 0.4 m bgl) and comprised a mixture of orange, red and grey mottled clays and tan fine—coarse grained sand.
- During investigation works, no evidence of staining or odours were noted within fill materials. Observations of anthropogenic inclusions such as bitumen, glass, metal wiring, ceramic or brick in fill materials were limited to a few isolated locations near the northern side of the bitumen access road leading to the former Site compound and one isolated location in the gully towards the south of the Site.
- Natural materials were generally encountered at surface or at depths ranging between 0.1 and 0.4 m bgl in locations with identified overlying fill. Natural materials were generally comprised of brown and red clays with occasional grey / orange inclusions, varying in stiffness and plasticity to a depth of approximately 2.5 m bgl overlying fine-grained interbedded shale and sandstone bedrock with clay bands to the maximum depth of investigation works.
- Results of field observations and laboratory analysis from soil samples collected as part of the DSI did not identify ACM within the Site, however as ACM has previously been reported within the portion of the Site identified as the “former married quarters area” ERM recommended that prior to the commencement of construction works an AMP should be developed and implemented during all onsite works to manage potential unexpected finds of ACM.

4.4 Potential for Unexpected Finds at the Site

The following table summarises the potential for unexpected finds of contamination within the Site requiring management under this AMP:

Table 3: Potential Residual Contamination

Potential Contaminated Media	Location	Contaminants of Concern	Comment
Asbestos contaminated soil beneath and potentially at surface	■ Location of Site detailed within Figure 1 ■ Location of the "Married Quarters" illustrated in Figure 2	Asbestos.	■ Asbestos Containing Material (ACM) was previously identified during investigations undertaken by Golder Associates in 2011 within a portion of the Site identified as the "former married quarters" (Appendix A – Figure 2). ERM notes that field observations and laboratory analysis undertaken during two more recent investigations undertaken by Western Environmental in 2019 and ERM in 2022 did not identify evidence of asbestos impacts within the Site including within the former married quarters. ■ Given the extensive sampling undertaken throughout the Site as part of previous investigations, it is expected any finds of ACM would be limited to isolated pockets of ACM within surface fill soils or ACM within service pits and conduits on the Site.

4.5 Preferred Asbestos Management Approach

The table below summarises the preferred management approach for any unexpected finds of ACM within the Site.

Table 4: Preferred Asbestos Management Approach

Media	CoPC	Preferred Remedial Approach
Soil	Asbestos	■ Due to the isolated nature of potential ACM contamination it is considered that the most practical and cost effective approach for the management of ACM impacted fill will be achieved via targeted / **selective excavation and offsite disposal**. ■ While significant volume of ACM impacted soils are considered unlikely, where large volumes of ACM impacted fill are identified during construction works that would result in significant costs for offsite disposal the potential for **onsite containment of impacted soils** may be considered. It is noted that at the time of this AMP, the final Site layout / design levels had not been finalised and as such the location, design etc. for a potential containment cell would be developed at a later time. It is further noted that where onsite containment is required, the specific location, suitability of materials and containment cell design would require review and approval by a NSW EPA accredited Site Auditor.

5. ASBESTOS IDENTIFICATION AND REMOVAL PROCEDURES

5.1 Suspected ACM Identification Procedure

While asbestos has reportedly been previously identified within the portion of the Site identified as the "former married quarters" (Appendix A – Figure 2), during soil investigation works undertaken as part of the Western Environmental (2019) DSI and ERM (2022) DSI , no evidence of ACM or other indicators of significant / widespread anthropogenic wastes were identified.

- As a result, any discoveries of suspected ACM would be considered an unexpected find.

Given the extensive sampling distribution across the Site it is expected that any finds of ACM would be limited to isolated pockets of ACM within surface fill soils within the former married quarters area, or ACM within service pits and conduits on the Site. The procedures to be followed in the event of an unexpected find are documents below.

During Site works, features that may indicate the potential for ACM to be present are:

- Fill soils containing anthropogenic artefacts such as rubble, plastics, metal etc.;
- Material with visible fibres; and
- Any material that has evidently been dumped at the Site.

Additionally, given the potential for ACM to be within the service infrastructure all service infrastructure should be visually inspected upon being uncovered, but prior to any disturbance, to determine if it is potentially asbestos containing.

5.1.1 Initial Find Procedure

- Cease disturbance of the affected portion of the Site and evacuate the immediate area;
- Contact the Principal Contractor and the other relevant subcontractors;
- Principal Contractor and any relevant subcontractors to conduct an assessment of the location and extent of the unexpected find:
  - High risk areas should be isolated and secured against unintended access;
- Where potential contamination has been encountered temporary encapsulation (sealing) of the high risk area to ensure no airborne spread of contamination occurs may be appropriate:
  - This may involve clean soil, plastic sheeting, etc;
- Dust should be prevented by wetting the soil and drainage controls should be arranged where there is a potential for runoff to occur (runoff should be minimised);
- Appropriate warning signs should be placed in the vicinity;
- If the Principal Contractor or relevant subcontractor considers that the material warrants further investigation, the area is to be barricaded to provide an exclusion zone;
- If necessary, environmental controls should be established to minimise the potential for migration of contaminants from the impacted area;
- Where material is to be excavated and stockpiled efforts are required to minimise the mixing of visually different materials types to avoid cross contamination:
  - Where possible stockpiles are to be placed onto 200µm thick plastic or impervious hardstand;
- Principal Contractor (or designated representative) to complete Unexpected Finds Protocol (UFP) form (refer to **Appendix B**) and issue to all relevant stakeholders;

- Further visual assessment, sample collection and analysis undertaken by a qualified environmental consultant. If necessary, samples will be sent to a NATA registered laboratory:
  - Soil sampling where it occurs will be in accordance with National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC, 2013);
  - Material will be sampled at a rate of 1 sample/25 m^3 of impacted material;
- Evaluation of analytical data with respect to specific health screening levels to be undertaken:
  - Following receipt of analytical data the UFP Form/Register is to be amended with final classification of soils, including whether the soils are suitable for the proposed land use or need to be remediated or disposed of offsite to a suitably licensed facility;
- If soils are suitable to remain on-site and/or the area is found to be clean, a work instruction will be provided by the environmental consultant to this effect;
- If materials are unsuitable to remain on Site a waste classification report will be prepared prior to any offsite disposal;
- If the material is subsequently found to contain asbestos, it is required to be disposed of in accordance with the NSW WHS Regulations and NSW EPA Waste Classification Guidelines. This includes waste tracking requirements; and
- If required asbestos air monitoring should also be undertaken by a suitably qualified environmental consultant/occupational hygienist during the disposal of asbestos contaminated materials.

Notes:

- Any licenced asbestos removal works must be notified to SafeWork NSW a minimum of 5 calendar days prior to works commencing;
- Any suspected asbestos containing should be left in place and not disturbed. The Principal Contractor and relevant subcontractors will organise appropriate environmental professionals for further investigation purposes;
- It is essential that material of differing compositions not be mixed;
- Where possible excavated materials should be stockpiled on 200µm thick plastic or impervious hard stand (ie concrete or asphalt) to limit the potential for cross-contamination:
  - Where stockpiled material cannot be placed on an impervious material, stockpile footprint sampling will be required as part of the validation process. Stockpile footprints will be sampled at a rate of 1 sample/100m^2 and subject to analysis for relevant contaminants of concern;
- All sampling for validation, waste classification or characterisation purposes will be carried out in accordance with the following documents:
  - *Contaminated Sites: Sampling Design Part 1 Application* (NSW EPA, 2022);
  - *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013* (No.1) (NEPC, 2013);
  - *Waste Classification Guidelines* (NSW EPA, 2014);
- Any unexpected finds encountered should be listed on a UFP register, which should include the action taken and the status of the unexpected find. A suitable register is included in **Appendix B**:
  - The principal contractor (or their designated representative) is responsible for the maintenance and updating of the UFP Register;

- Once an unexpected find has been identified and a UFP form filled in the Principal Contractor and relevant subcontractors should liaise with the client as to the appropriate means of managing the situation. This should include discussions around the handling, treatment and disposal of material, WHS considerations and how the affected area will be validated and reopened for works;
- Prior to closing out an unexpected find it will be important to ensure the appropriate documentation is obtained, such as: photographs, the UFP form, waste classification letter(s) and a validation report or letter; and
- Identified unexpected finds generated from site works in the process of being assessed onsite are to be tracked as part of the Site Material Tracking Register. This register is to be updated during any activities onsite such as moving the find from the original source location, material assessment works to date, and tracking materials for ultimate reuse or offsite disposal.

5.2 Asbestos Removal Procedures

The following asbestos removal procedures are to be implemented for isolated finds of asbestos contamination within surface soils, or for the removal of redundant asbestos containing service infrastructure. Off Site disposal of the ACM will be the nominated removal strategy.

- **The most likely remediation option for any unexpected finds of ACM identified during the development of the Site will be excavation and offsite disposal, as it is envisioned that any unexpected finds will be small in volume.**
- **While significant volume of ACM impacted soils are considered unlikely, where large volumes of ACM impacted fill are identified during construction works that would result in significant costs for offsite disposal the potential for onsite containment of impacted soils may be considered.**
- **It is noted that at the time of this AMP, the final Site layout / design levels had not be finalised and as such the location, design etc. for a potential containment cell would be developed at a later time. It is further noted that where onsite containment is required, the specific location, suitably of materials and containment cell design would require review approval by a NSW EPA accreted site auditor.**

In accordance with the Work Health and Safety Regulation 2017 (NSW), only Class A asbestos removal licence holders are permitted to conduct asbestos removal work or asbestos-related work that involves friable asbestos. Should friable asbestos be encountered a Class A Licensed Removal Contractor will be required to undertaken any proposed removal works. Non-friable removal works can be undertaken by a Class A or Class B Licensed Removalist.

Prior to the commencement of remediation works, the nominated asbestos removal contractor will notify SafeWork NSW of the intention to complete the removal of greater than 10m^2 of bonded ACM or the removal of friable asbestos as applicable. The works boundary will be defined as the extent of the Site so as to avoid any requirements of re-notification throughout Site works.

In addition to notifying Safe Work NSW, all site workers will be made aware of the location/nature of identified asbestos. This notification can be done daily during a toolbox talk.

Personal protection equipment (PPE) to be worn at all times during asbestos remediation works must include:

- Disposable overalls;
- Respiratory protection (P2 Minimum);
- Safety boots;
- Hard hat and other Site/task specific PPE; and
- Enclosed cabin (the above PPE is not required within an enclosed cabin).

5.2.1 Isolated ACM within Surface Soils

Where ACM fragments are identified in surface soils and not in underlying fill, the fragments will be hand-picked by a Class B licensed asbestos contractor and placed in appropriately labelled bags. Bags will be packaged in accordance with *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019).

Following the completion of hand-picking, the residual soils will be systematically inspected by a suitably qualified environmental consultant for the presence of visible ACM fragments in a back and forth fashion in systematic transects. Where suspected ACM is visually identified by the consultant, additional hand-picking will be carried out.

Following the completion of a successful visual clearance by the consultant where no ACM fragments are identified on residual soils, validation soil sampling will be carried out in accordance with **Section 5.4**of this document.

5.2.2 ACM within Sub-surface Soils

Where ACM fragments are identified within both surface and subsurface soils, the removal procedure will be as follows:

1. Nominate and set out the impacted area for excavation;
2. Prior to the commencement of excavations in any given area, establish a 10 metre Exclusion Zone with the installation of safety warning signs and barricade measures around the boundary of the excavations;
    a. No personnel are to enter the exclusion zone without adequate PPE and training;
3. Excavate the material impacted by ACM to the depth of natural soil;
    a. Excavator operator(s) and truck driver(s) within enclosed cabs are to remain inside their vehicles during the loading operation. The air-conditioning is to be on ‘recirculate’ or switched off. If the cab is not enclosed, full PPE is to be worn;
    b. During the excavation operation the materials are too be wetted thoroughly;
    c. Material inadvertently spilt on the ledges of the truck or truck sides are to be washed off prior to the truck leaving the area; and,
    d. On completion of the work the operators should move to the designated decontamination area;
4. Excavated ACM contaminated material to be disposed of at a suitably licensed landfill following waste classification;
    a. Classification may occur in-situ prior to excavation or ex-situ from stockpiles dependent on Site conditions;
5. The excavation will require asbestos clearance/validation following load out; and,
6. Following receipt of an Asbestos Clearance Certificate the area can now be accessed by the general personal to proceed with the Site works.

5.2.3 Asbestos Containing Service Infrastructure

Where redundant asbestos containing infrastructure (i.e. pipework or pits) is identified removal works will be carried out in accordance with *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019) and the following methodology:

1. Soil overlying the infrastructure will be excavated by, or under the supervision of licensed asbestos contractors and stockpiled to one side of the service line. The infrastructure will not be exposed during this process, with only preliminary excavation undertaken to expose the infrastructure in order to check the depth and ensure an appropriate buffer was maintained to prevent disturbance. This soil is to be stockpiled for onsite reuse, as no contact with asbestos has occurred at this point.
2. On a subsequent pass, the infrastructure will be fully exposed and gently removed by the contractors. The infrastructure will be disposed off-site as asbestos waste.
3. Soils removed during Step 2 should be stockpiled alongside the excavation area, on the opposite side of the excavation to the overlying spoil. These soils previously in direct contact with infrastructure (i.e. material within approximately 100 mm) will undergo sampling and analysis for either beneficial reuse onsite or disposed off-site as asbestos waste.

NOTE: If laboratory results indicate the material requires disposal, chemical sampling will be conducted to adequately characterise the soils in accordance with the *Waste Classification Guidelines* (NSW EPA, 2014).

4. Following removal of the asbestos containing infrastructure and potential asbestos impacted soil, asbestos validation sampling of the excavation faces, stockpiled soil and stockpile footprints is to be carried out in accordance with **Sections 5.4** of this document.
5. If results indicate no asbestos is detected, no further material will be removed from the area. Where asbestos is detected in validation samples, further remediation and validation sampling will be conducted.

5.3 Decontamination

5.3.1 Personal Decontamination

Issue Appropriate hygiene and decontamination assists with minimising worker exposure and the transportation of potentially contaminated materials from work areas to more sensitive environments.

Criteria No contaminated clothing or PPE to leave the work areas.

Controls

1. Eating, drinking, chewing gum and smoking will be prohibited at all times whilst working in potentially hazardous areas.
2. All individuals undertaken asbestos disturbing works at the Site will pass through a decontamination unit or decontamination prior to exiting work areas in accordance with *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019). All outer work material will be physically removed from personnel prior to exiting work areas.
3. Remain in full PPE in work areas at all times.
4. Plant operators are to remain inside vehicle during operation with windows and doors closed and air-conditioning on recycle only or switched off.

5.3.2 Vehicle Decontamination

Issue Appropriate vehicle and equipment decontamination assists with minimising worker exposure and the transportation of potentially contaminated materials from work areas to more sensitive environments.

Criteria No contaminated vehicle or equipment to leave the work areas.

Controls

1. Trucks and equipment required for asbestos removal/remediation works will remain within the works area until the completion of works. Vehicles will not traffic between work areas and other areas of the Site, including lunch areas, car parks, etc.
2. Truck cleaning areas will be used to wash down all vehicles potentially coming into contact with contaminated soil leaving all remediation or works areas. The surface of internal access roads carrying vehicular traffic will be kept clean.
3. Vehicles carrying fill materials sourced from the Site will at all times be covered with an “enviro-tarp” or similar impervious material to prevent the escape of dust or other material.
4. A log of all trucks removing fill material from the Site or importing soil to the Site will be kept in a Truck Log book.

5.4 Asbestos Clearance / Validation Procedures

All asbestos removal locations will be subject to asbestos clearance and validation at the completion of removal works and generally will comprise of visual inspection and validation sampling of:

- Surface soils following hand-picking of ACM fragments;
- Walls and base of excavations created on-site to facilitate removal of asbestos contaminated soils or asbestos containing infrastructure; and,
- Stockpile footprints following on-site relocation or off-site disposal. However, where stockpiles are placed onto 200µm plastic, footprint sampling will not be required.

All clearance inspections outlined hereafter, should be conducted in accordance with Section 3.10 *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2018). In accordance with Clause 473 and 474 of the WHS Regulations (2017) at the completion of any asbestos removal works (should they occur) a written asbestos clearance certificate is required before the removal area can be re-occupied and works resumed. As asbestos removal works on the Site are most likely going to be occurring in distinct pockets each removal area will require a separate clearance certificate to allow for reoccupation. At the completion of works a Validation Report will be prepared in accordance with *Consultants reporting on contaminated land: Contaminated Land Guidelines* (NSW EPA, 2020) and include all clearance certificates issued for the Site.

The following sections outline the sampling and analysis plan for conducting asbestos clearance and validation works depending on the type of asbestos contamination.

5.4.1 Asbestos Clearance/Validation Criteria

The adopted Health Screening Level have been sourced from the NSW EPA endorsed *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC, 2013) and are provided in **Table 5** below.

Table 5: Asbestos Clearance/Validation Criteria

Form of Asbestos	Health Screening Level (w/w)
Bonded ACM	0.01%
Fibrous Asbestos	0.001%
Asbestos Fines	0.001%
Surface Asbestos (0-0.1 m BGL)	No visible asbestos

5.4.2 Surface ACM Validation

Following hand-picking of ACM fragments from the surface or the removal/relocation of an ACM impacted stockpile a clearance inspection will be carried out of surface soils and samples collected to confirm no residual asbestos contamination.

The clearance inspection will be performed by a competent environmental consultant or hygienist walking systematic transects of the impacted area with clearance/validation samples collected at a rate of one sample per 50 m^2 (or part thereof).

In the case that the clearance inspection identifies ACM fragments or results indicate concentrations that exceed the adopted HSLs, the surface of the area will be hand-picked or scraped by the remediation contractor and another round of inspection and validation sampling will be carried out. This will continue until the remedial objectives are achieved.

5.4.3 Asbestos Excavation Validation

Following the excavation of asbestos impacted soils a clearance inspection will be conducted and validation samples collected. As a minimum, sampling numbers and analysis will conform to the plan presented in **Table 6**.

Table 6: Asbestos Excavation Validation Plan

Location	Sampling Density
Excavation Base	One sample per 50 m^2 or part thereof.
Excavation Walls (North, East, South, West)	A minimum of one sample from each wall, where the depth of excavation is greater than 0.5 m bgl; At least 1 sample from each wall per 5 m length of strata of interest; Where a wall is greater than 1 m high, there is a change of strata, or visual evidence of contamination, an additional sample will be collected at the rate of 1 sample per 1 m depth interval and additional discretionary samples where there is visual or olfactory evidence of contamination

In the case that the clearance inspection identifies ACM fragments, or laboratory analysis reports elevated contaminant concentrations, additional excavation will occur at the inspection/sampling location, followed by another round of inspection and validation sampling to be carried out. This will continue until the remedial objective is achieved.

5.4.4 Validation of Asbestos Pipe Removal

Following the removal of asbestos pipe, a clearance inspection will be conducted and asbestos validation samples collected. As a minimum, sampling numbers and analysis will conform to the validation plan presented in Table **7**.

Table 7: Asbestos Pipe Removal Validation Plan

Location	Sampling Density
Trench Base	One sample per 20 Lineal metres
Trench Walls	One wall sample per 20 lineal metres, at the depth of pipe removal, where the depth of excavation is greater than 0.5 m bgl; (Where a wall is greater than 1 m high, a greater number of samples may be collected in a vertical plane at discretionary sampling locations)

Each asbestos sample will be collected as a bulk sample and constitute five grab samples from the 20 m interval of wall or base, to ensure adequate coverage and representation of the validation area. Based on a typical 1m wide by 1 m deep excavation, one sample per 20 m length interval (wall or base), is equivalent to 1 sample per 20 m^2 area.

6. ASBESTOS REMEDIATION / REMOVAL AND CLEARANCE REQUIREMENTS

Outlined below are the minimum asbestos clearance certification procedures and methodology to be utilised following the completion of removal of asbestos-contaminated material. The procedures were formulated from methods outlined in Section 3.10 “Clearance Inspection” and Section 3.11 “Air Monitoring” in the *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019).

6.1 Visual Asbestos Clearance Inspection

Following the movement of ACM impacted materials; a visual inspection must be conducted of the residual materials. The remediation area is to be systematically visually inspected in a back and forth fashion across the area by an appropriate independent competent person or licensed asbestos assessor (LAA) in systematic transects.

The area is to be inspected thoroughly for the presence of visual ACM. Upon completion of the remediation process and satisfactory visual inspection results, asbestos clearance soil sampling can be conducted within the remediation area as appropriate.

6.2 Asbestos Air Monitoring Program

With regards to the Site, Project Management in association with the designated environmental consultant will establish monitoring programs as appropriate, to ensure that all activities undertaken in relation to asbestos comply with relevant exposure limits, standards and guidelines. Where disturbance of identified Bonded ACM is a potential, a monitoring program can be implemented. Should friable asbestos be identified an air monitoring program is required.

Monitoring requirements include:

- Daily Airborne Asbestos Monitoring during all works undertaken within areas identified with unexpected finds of asbestos; and
- Final clearance monitoring within the remediation area following the removal of all visible asbestos contamination.

Should an air monitoring program be required the number of monitors used will be dependent on the proposed works with a minimum of two sample pumps to be used. The location of monitors will be based upon the most susceptible areas to airborne asbestos contamination and transportation or areas of higher risk, e.g. downwind of works, enclosure entry/exit etc.

Monitoring results will be reported to the Project Manager as soon as possible after the conclusion of the monitoring interval. Results are required to be readily available and accessible to both management and employees and displayed in a prominent position. Every week, the Project Manager will provide a summary of current monitoring results detailing dates of sampling, fibre concentration levels and the date of notification of results to the Project Manager. These results will be communicated to all site personnel.

The risk associated with asbestos relates to the inhalation of airborne asbestos fibres. These fibres may be liberated by disturbance of the asbestos-containing material or dusts. Air sampling is used to determine exposure to airborne asbestos fibres, using a modified version of the Membrane Filter Method (NOHSC, 2005). Once asbestos exposure levels are determined, a level of action is to be taken in response to the recorded levels. These actions are listed below in **Table 8**.

Table 8: Recommended Action Levels for Asbestos Exposures

Measured Fibre Concentration (% of Exposure Standard)	Recommended Action
<0.01 fibres/mL	No action necessary; maintain a low-level baseline air sampling program and Continue with Control Measures
> 0.01 fibres/mL	1) Review Control Measures. 2) Ensure all PPE requirements and Decontamination practices are being complied with in the area. 3) Increase monitoring frequency, focusing on personal exposure monitoring and worker category assessment. Ensure personal exposures are maintained as low as practicable. Investigate workplace/work practices and control measures. Invoke agreed work and management procedures. Implement routine personal monitoring and auditing procedures.
Result > 0.02 fibres/mL	1) Stop work in the affected area and investigate the cause of elevated results. 2) Designate area and take remedial action. Implement formal asbestos management procedures including cease work until such time as asbestos concentrations are acceptable.

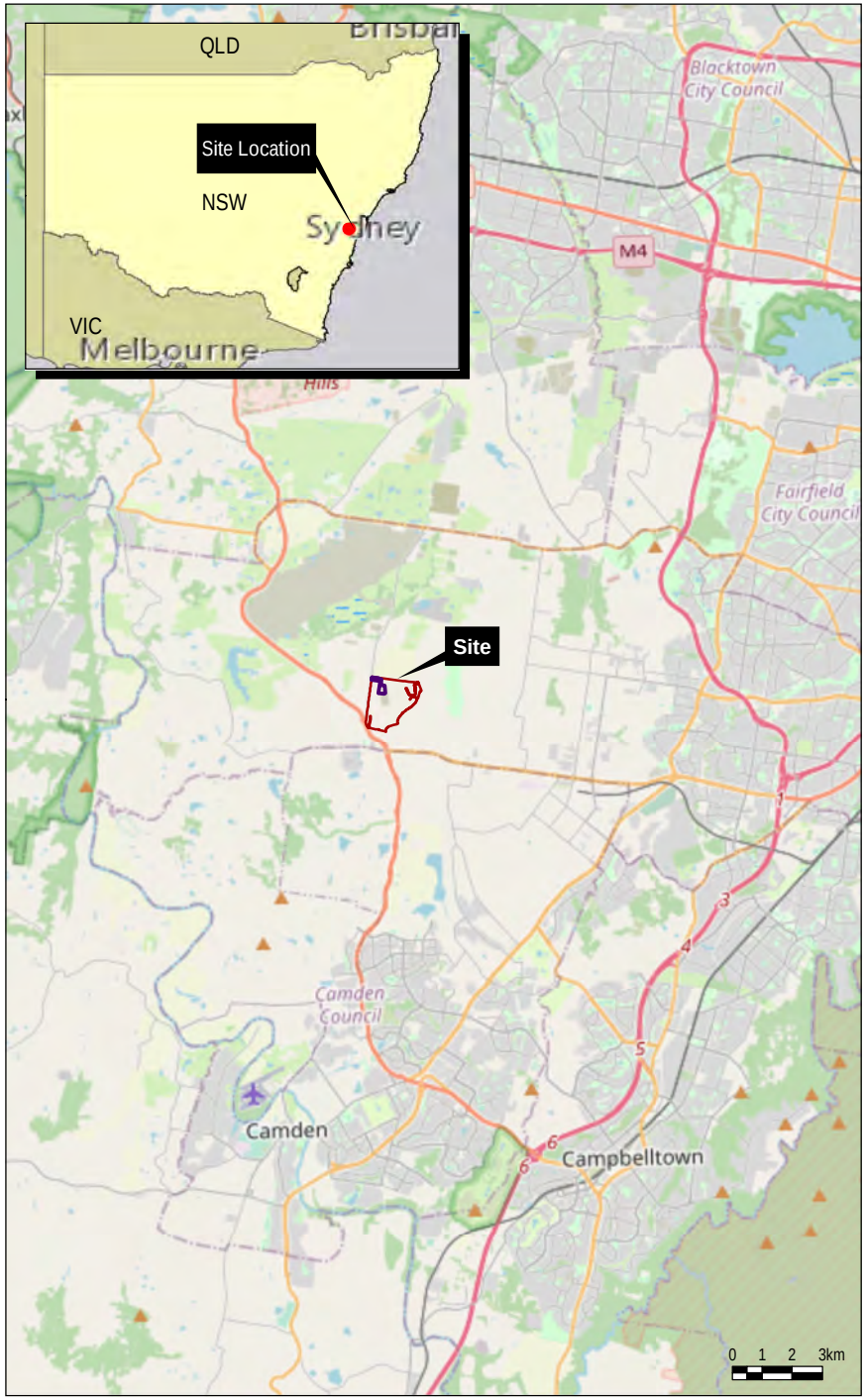
It is important that the interpretation of these results is undertaken by an experienced person conversant with the Membrane Filter Method and its limitations. All results of air sampling must be recorded and filed. The results will be reported and made available to all employees.

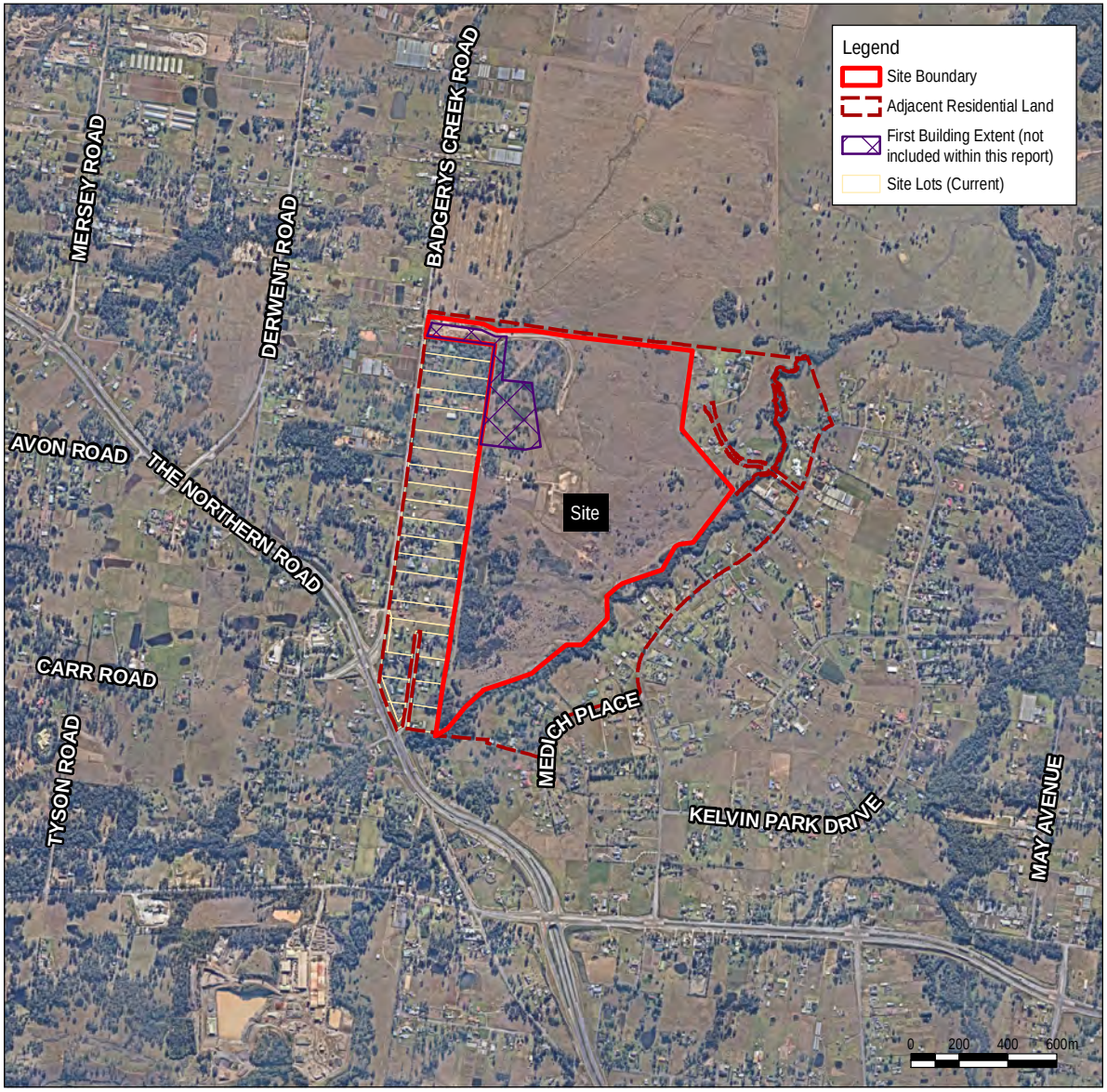
Auditing procedures should be used as the primary technique to ensure that agreed work and management procedures and control measures are operating effectively. Airborne Asbestos Monitoring will be carried out using the only internationally recognised sampling and analytical methodology - *the Membrane Filter Method for Estimating Airborne Asbestos Dust (NOHSC:3003 (2005))*.

7. REPORTING AND AMP AUDITING REQUIREMENTS

Report	Requirement
Material Classification Reports	■ All reports relating to unexpected finds, offsite disposal of fill materials and importation of any materials used for construction / backfilling purposes are to be provided to the land custodian upon completion of works. ■ Reports are to include details on the methodology, sampling rationale, laboratory analysis and subsequent classification information and materials tracking information detailing the total volume and final placement / disposal location. ■ ERM notes that all waste classification works are to be undertaken in accordance with relevant NSW EPA requirements at the time of works.
Non-Conformance Reporting	■ Non-conformances will be recorded in a Non-Conformance and Corrective Action Report. Details of the non-conformance, including any immediate corrective actions undertaken, are to be recorded by the land custodian. ■ It is the responsibility of the site foreman to immediately inform the land custodian of any non-conformances and initiate corrective actions, if required. Once completed, the site foreman will provide details of the actions undertaken on the Non-Conformance Report and sign, date and file the report.
Incident Reporting	■ Records will be kept of any environmental incidents, accidents, hazardous situations, unusual events and unsafe health exposures and the corrective action taken. ■ The contractor / site superintendent will adequately investigate the cause of any incident so that necessary changes in work practices can be made to prevent the incident recurring.
Complaints Reporting	■ The contractor will maintain a register of complaints, which will include a record of any action taken with respect to the complaints. ■ If a complaint identifies a non-conformance, a Non-Conformance and Corrective Action Report must be initiated. ■ A copy of all complaint reports and subsequent investigations are to be provided to the land custodian or their nominated representative for filing and included within compliance reporting (detailed below).
AMP Auditing	■ Upon completion of any works involving the management of ACM within the Site, the contractor or its nominated representative will review all environmental documents, records and monitoring results to ensure compliance with the requirements of the AMP and current statutory requirements. ■ Results of audit findings are to be provided to the land custodian in accordance with any reporting criteria specified within relevant works approvals.
AMP Review / Update	■ The AMP should be reviewed, and updated as necessary after 2 years or where audit findings indicate the need for updating / refining of management controls. ■ Results of review findings and potential recommendations for required updates are to be provided to the land custodian. ■ ERM notes that where the AMP requires updating, all changes / amendments must be undertaken by a suitably qualified environmental specialist (or professional) and approved / endorsed by an ACT EPA approved Site Auditor and the ACT EPA prior to implementation.
Site Validation Reporting	Upon completion of any works requiring the management / offsite disposal of ACM impacted fill within the Site, the contractor is to provide the land custodian or their nominated representative an Site Validation Report written in accordance with NSW EPA guidelines for reporting on contaminated sites (at the time of works) ■ **ERM notes that the Site Validation Report will require review / endorsement by a NSW EPA accredited site auditor.** The report is to be provided to land custodian or their nominated representative within **21 days** of completion of works. The land custodian should keep these reports for records.
Record Keeping	All records related to implementation and ongoing auditing of the AMP should be maintained by the land custodian or their nominated representative in a consolidated and easily accessible location.

APPENDIX A FIGURES





Data Source:
NSW DFSI - DCDB / DTDB 2021
Nearmap Imagery June 2022
Esri OpenStreetMap 2022

Site Location

F1

Drawing No:	0571466s_AMP_G001_R0.mxd		Bradfield City Centre Asbestos Management Plan
Date:	04/10/2022	Drawing Size: A4	
Drawn By:	GC / RH	Reviewed By: IB	Client: Western Parkland City Authority
Coordinate System: GDA 1994 MGA Zone 56		N	This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

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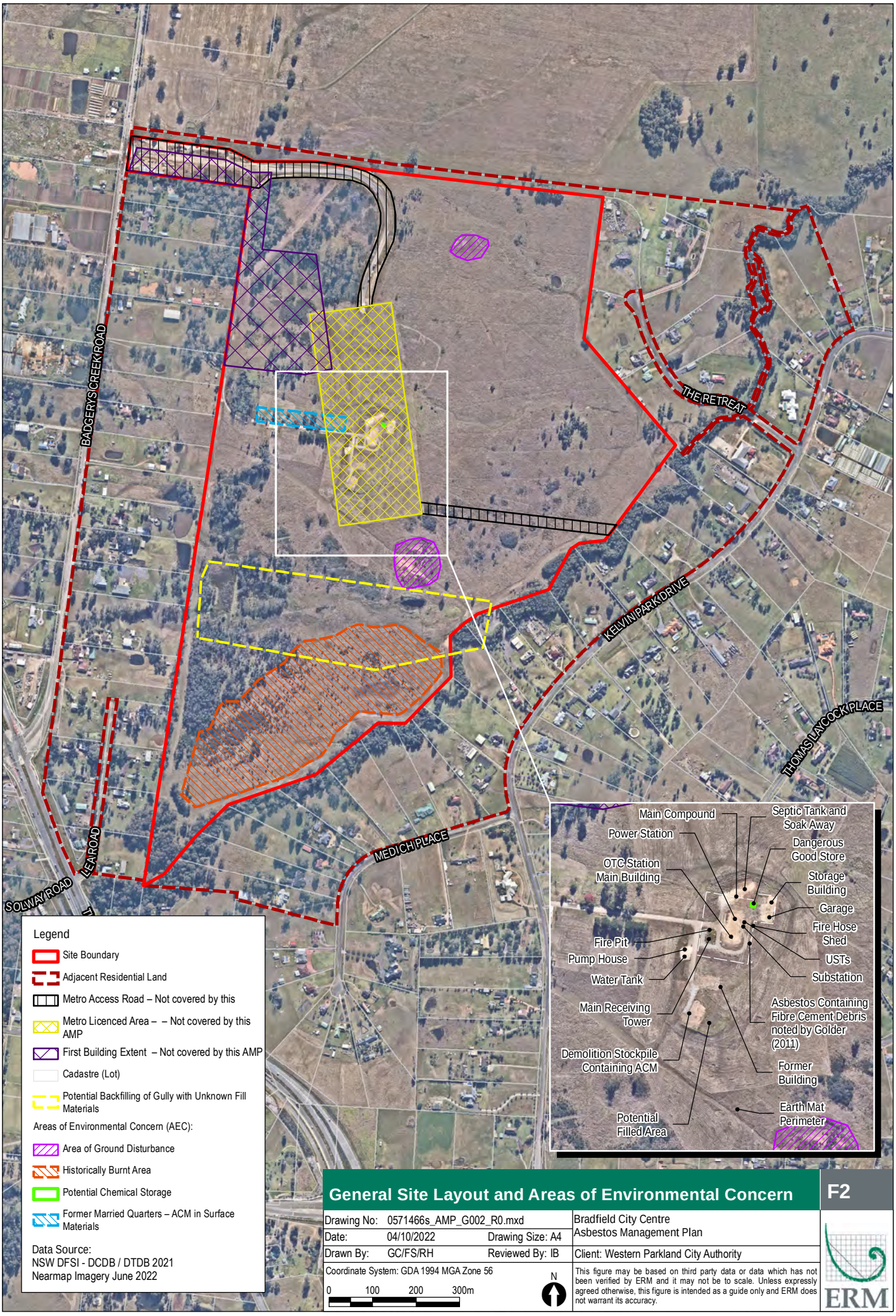

General Site Layout and Areas of Environmental Concern

F2

Drawing No: 0571466s_AMP_G002_R0.mxd		Bradfield City Centre Asbestos Management Plan
Date: 04/10/2022	Drawing Size: A4	
Drawn By: GC/FS/RH	Reviewed By: IB	Client: Western Parkland City Authority

Coordinate System: GDA 1994 MGA Zone 56

0 100 200 300m

N

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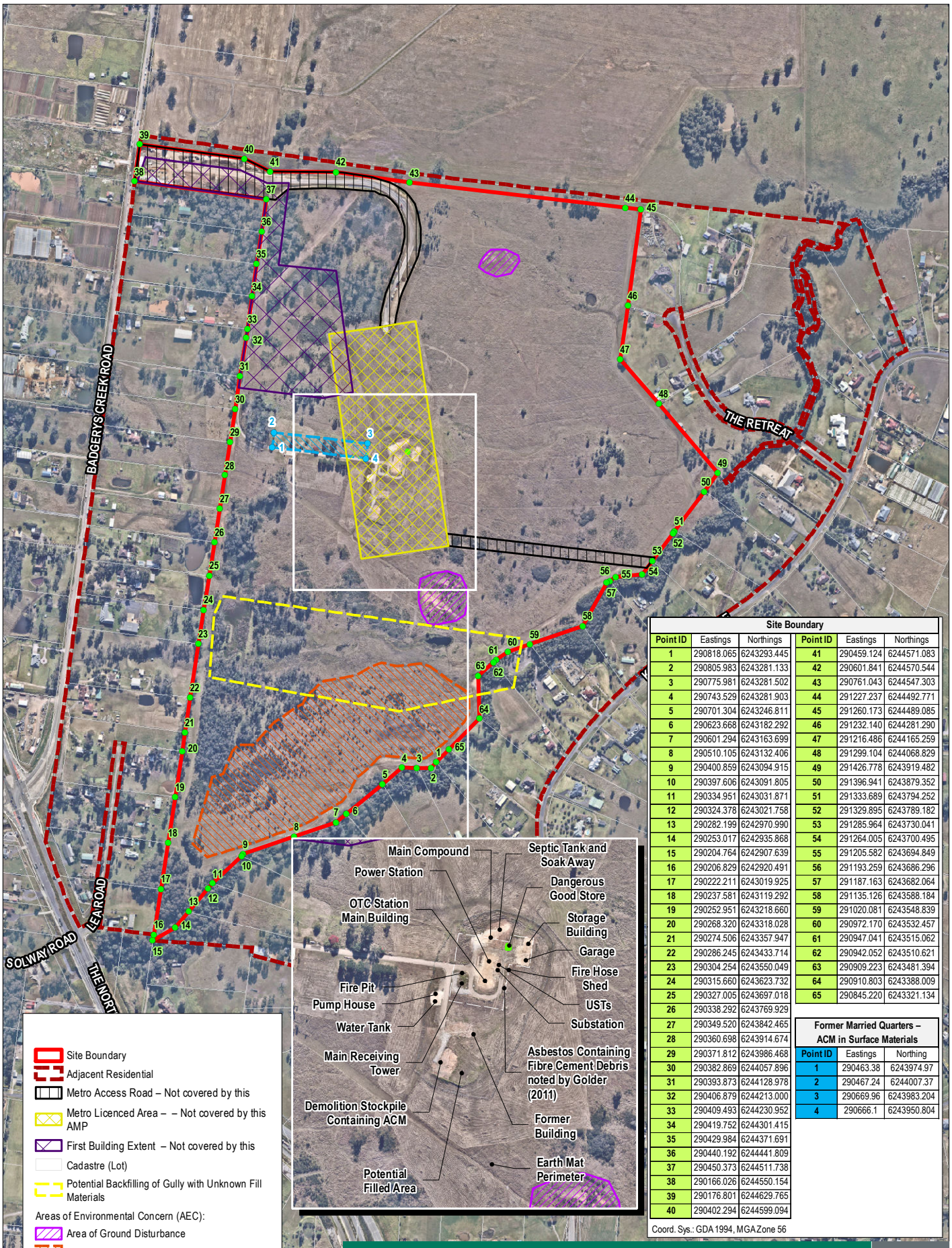

Site Boundary

Point ID	Eastings	Northings	Point ID	Eastings	Northings
1	290818.065	6243293.445	41	290459.124	6244571.083
2	290805.983	6243281.133	42	290601.841	6244570.544
3	290775.981	6243281.502	43	290761.043	6244547.303
4	290743.529	6243281.903	44	291227.237	6244492.771
5	290701.304	6243246.811	45	291260.173	6244489.085
6	290623.668	6243182.292	46	291232.140	6244281.290
7	290601.294	6243163.699	47	291216.486	6244165.259
8	290510.105	6243132.406	48	291299.104	6244068.829
9	290400.859	6243094.915	49	291426.778	6243919.482
10	290397.606	6243091.805	50	291396.941	6243879.352
11	290334.951	6243031.871	51	291333.689	6243794.252
12	290324.378	6243021.758	52	291329.895	6243789.182
13	290282.199	6242970.990	53	291285.964	6243730.041
14	290253.017	6242935.868	54	291264.005	6243700.495
15	290204.764	6242907.639	55	291205.582	6243694.849
16	290206.829	6242920.491	56	291193.259	6243686.296
17	290222.211	6243019.925	57	291187.163	6243682.064
18	290237.581	6243119.292	58	291135.126	6243588.184
19	290252.951	6243218.660	59	291020.081	6243548.839
20	290268.320	6243318.028	60	290972.170	6243532.457
21	290274.506	6243357.947	61	290947.041	6243515.062
22	290286.245	6243433.714	62	290942.052	6243510.621
23	290304.254	6243550.049	63	290909.223	6243481.394
24	290315.660	6243623.732	64	290910.803	6243388.009
25	290327.005	6243697.018	65	290845.220	6243321.134
26	290338.292	6243769.929			
27	290349.520	6243842.465			
28	290360.698	6243914.674			
29	290371.812	6243986.468			
30	290382.869	6244057.896			
31	290393.873	6244128.978			
32	290406.879	6244213.000			
33	290409.493	6244230.952			
34	290419.752	6244301.415			
35	290429.984	6244371.691			
36	290440.192	6244441.809			
37	290450.373	6244511.738			
38	290166.026	6244550.154			
39	290176.801	6244629.765			
40	290402.294	6244599.094			

Coord. Sys.: GDA 1994, MGA Zone 56

Former Married Quarters – ACM in Surface Materials

Point ID	Eastings	Northing
1	290463.38	6243974.97
2	290467.24	6244007.37
3	290669.96	6243983.204
4	290666.1	6243950.804

General Site Layout and Areas of Environmental Concern

F2

Drawing No: 0571466s_AMP_G002_R0.mxd
Date: 14/10/2022 Drawing Size: A4
Drawn By: CB Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56

0 100 200 300m

N

Bradfield City Centre
Asbestos Management Plan

Client: Western Parkland City Authority

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM

APPENDIX B UNEXPECETED FIND PROTOCOL FORM AND REGISTER

UNEXPECTED FINDS PROTOCOL FORM EXAMPLE

To be completed by the Principal Contractor/Environmental Representative

SITE:

PERSONNEL ON-SITE:

DATE:

DAILY SUMMARY:

1. Suspect material encountered during daily activities: YES ☐ NO ☐

(if YES, compete 2 to 5)

2. Environmental Representative contacted: YES ☐ NO ☐

3. UFP Reference Number

(label occurrences sequentially 1, 2, 3, etc.).

DESCRIPTION OF MATERIAL ENCOUNTERED:

4. Asbestos or suspected ACM present: YES ☐ NO ☐

5. Brief written description of material:

6. Material isolated: YES ☐ NO ☐

7. Location of contaminated material (incl. field sketch/map if required):

8. Photographs taken: YES ☐ NO ☐

NAME: **SIGNATURE:**

Unexpected Finds Register Example

UFP No.	Date Found	Suspect Material	Description	Recorded on UFP Form	Action Taken	Status
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		

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Mozambique
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		Name	Name	Signature	Date
0	Christine Louie/ Andrew Lau	Andrew Lau	Andrew Lau		15/11/2022

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APPENDIX I (b)

20230913 Contamination Report (Site Audit Statement)

NSW Site Auditor Scheme

Site Audit Statement

A site audit statement summarises the findings of a site audit. For full details of the site auditor's findings, evaluations and conclusions, refer to the associated site audit report.

This form was approved under the *Contaminated Land Management Act 1997* on 12 October 2017.

For information about completing this form, go to Part IV.

Part I: Site audit identification

Site audit statement no. **0503-2304**

This site audit is a:

❑ statutory audit

☑ non-statutory audit

within the meaning of the *Contaminated Land Management Act 1997*.

Site auditor details

(As accredited under the *Contaminated Land Management Act 1997*)

Name **Andrew Lau**

Company **JBS&G**

Address **Level 1, 50 Margaret Street**

Sydney **NSW** Postcode **2000**

Phone **02 8245 0300**

Email **alau@jbsg.com.au**

Site details

Address **215 Badgerys Creek Road**

Bringelly NSW Postcode **2556**

Property description

(Attach a separate list if several properties are included in the site audit.)

Part Lot 101 in DP 1282949

Local government area **Liverpool**

Area of site (include units, e.g. hectares) **94.56 hectares**

Current zoning **ENZ Environment and Recreation and MU Mixed Use**

Regulation and notification

To the best of my knowledge:

☐ ~~**the site is** the subject of a declaration, order, agreement, proposal or notice under the *Contaminated Land Management Act 1997* or the *Environmentally Hazardous Chemicals Act 1985*, as follows: (provide the no. if applicable)~~

- ☐ ~~Declaration no.~~
- ☐ ~~Order no.~~
- ☐ ~~Proposal no.~~
- ☐ ~~Notice no.~~

☑ **the site is not** the subject of a declaration, order, proposal or notice under the *Contaminated Land Management Act 1997* or the *Environmentally Hazardous Chemicals Act 1985*.

To the best of my knowledge:

☐ ~~the site **has** been notified to the EPA under section 60 of the *Contaminated Land Management Act 1997*~~

☑ the site **has not** been notified to the EPA under section 60 of the *Contaminated Land Management Act 1997*.

Site audit commissioned by

Name **Paul Hedge**

Company **Western Parkland City Authority**

Address **Level 2, 10 Valentine Avenue**

Parramatta NSW Postcode **2150**

Phone **0413 587 340**

Email **Paul.Hedge@wpca.sydney**

Contact details for contact person (if different from above)

Name **As Above**

Phone

Email

Nature of statutory requirements (not applicable for non-statutory audits)

☐ ~~Requirements under the *Contaminated Land Management Act* 1997 (e.g. management order; please specify, including date of issue)~~

☐ ~~Requirements imposed by an environmental planning instrument (please specify, including date of issue)~~

☐ ~~Development consent requirements under the *Environmental Planning and Assessment Act 1979* (please specify consent authority and date of issue)~~

☐ ~~Requirements under other legislation (please specify, including date of issue)~~

Purpose of site audit

☐ ~~**A1** To determine land use suitability~~

~~Intended uses of the land:~~

~~OR~~

☐ ~~**A2** To determine land use suitability subject to compliance with either an active or passive environmental management plan~~

~~Intended uses of the land:~~

~~OR~~

(Tick all that apply)

☑ **B1** To determine the nature and extent of contamination

☑ **B2** To determine the appropriateness of:

- ☐ ~~an investigation plan~~
- ☑ a remediation plan
- ☐ ~~a management plan~~

☐ ~~**B3** To determine the appropriateness of a **site testing plan** to determine if groundwater is safe and suitable for its intended use as required by the *Temporary Water Restrictions Order for the Botany Sands Groundwater Resource 2017*~~

☐ ~~**B4** To determine the compliance with an approved:~~

- ☐ ~~**voluntary management proposal** or~~
- ☐ ~~**management order** under the *Contaminated Land Management Act 1997*~~

☑ **B5** To determine if the land can be made suitable for a particular use (or uses) if the site is remediated or managed in accordance with a specified plan.

Intended uses of the land:

- Public open space/recreation
- Commercial/industrial
- Medium to high density residential
- Mixed use – including retail, hotel, child care facilities, community and education

Information sources for site audit

Consultancies which conducted the site investigations and/or remediation:

Environmental Resources Management Australia Pty Ltd (ERM)

Titles of reports reviewed:

- *Aerotropolis Core Precinct, Review of Contamination Issues.* 17th June 2021, Rev 3, Final (Environmental Resources Management Australia Pty Ltd, 2021b);
- *Aerotropolis Core Precinct – Commonwealth Land, Sampling and Analysis Quality Plan.* 8 July 2021, Rev 2, Final V2 (Environmental Resources Management Australia Pty Ltd, 2021c);
- *Asbestos Management Plan, Bradfield City Centre.* 8 November 2022, Rev 2, Final (Environmental Resources Management Australia Pty Ltd, 2022b); and
- *Detailed Site Investigation, Bradfield City Centre, NSW*. 10 November 2022, Rev 5, Final V2 (Environmental Resources Management Australia Pty Ltd, 2022c).

Other information reviewed, including previous site audit reports and statements relating to the site:

- *Unexploded Ordnance (UXO) Consultancy Services, RAAF Receiving Station Site Bringelly, NSW*. V1.01, 13 January 2011. G-tek Australia Pty Limited (G-tek 2011);
- *Bringelly RAAF Receiving Station, Infrastructure Assessment Report, April 2011*. Rev no. 2, 8/2/11. GHD Pty Ltd (GHD 2011);
- *RAAF Bringelly Receiving Station, NSW, Heritage Assessment*. 0121954, 18 April 2011. Environmental Resources Management Pty Ltd (ERM 2011);
- *Bringelly RAAF Receiving Station, Bringelly, NSW. Stage 1 Overarching Report – Summary Outcomes of Due Diligence Investigations*. Final Report, August 2011. Sweet (Australia) Pty Ltd (Sweett 2011);
- *Hazardous Building Materials Assessment, Former RAAF Bringelly Receiving Station*. 107623154 018 Rev 0, August 2011. Golder Associates Pty Ltd (Golder 2011a);
- *Detailed Site Investigation, Former RAAF Bringelly Receiving Station*. 107623154 021 R Rev 0, October 2011. Golder Associates Pty Ltd (Golder 2011b);
- *Remedial Action Plan, Former RAAF Bringelly Receiving Station*. 117623154-036-R-Rev3, April 2014. Golder Associates Pty Ltd (Golder 2014);
- *215 Badgerys Creek Road, Bringelly, NSW, Detailed Site Investigation Report*. P19.114-RPT-DSI_0, 13/12/2019. Western Environmental Pty Ltd (Western Environmental 2019);
- *Sydney Metro Greater West Technical Paper 8: Contamination*. Rev 3, June 2020. M2A Pty Ltd (M2A 2020a);
- *Sydney Metro Western Sydney Airport Technical Paper: Non-Aboriginal heritage*. Draft Revision 5, July 2020. Artefact Heritage Services (Artefact Heritage 2020);
- *Sydney Metro – Western Sydney Airport, Technical paper 5: Aboriginal Heritage*. Rev 2, July 2020. M2A Pty Ltd (M2A 2020b);

- *Western Sydney Aerotropolis Constraints and Land Capability Assessment – Stage 1 Report*. September 2020. Aurecon Australasia Pty Ltd (Aurecon 2020);
- *Aerotropolis Core Precinct, Targeted Site Investigation*. Final, 21 May 2021 (Environmental Resources Management Australia Pty Ltd, 2021a);
- *Detailed Site Investigation, First Building Area Bradfield City Centre, NSW*. 10 June 2022, Rev 4, Final (Environmental Resources Management Australia Pty Ltd, 2022a); and
- *Site Audit Report 0503-2108. First Building Area Bradfield City Centre 215 Badgerys Creek Road Bringelly NS*W. Rev 0, July 2022. JBS&G 2022a.

Site audit report details

Title **Site Audit Report 0503-2304, Bradfield City Centre, 215 Badgerys Creek Road Bringelly NSW**

Report no. **60627/147,178 (Rev 0)** Date **15 November 2022**

Part II: Auditor's findings

Please complete either Section A1, Section A2 or Section B, not more than one section. (Strike out the irrelevant sections.)

- Use **Section A1** where site investigation and/or remediation has been completed and a conclusion can be drawn on the suitability of land uses **without the implementation** of an environmental management plan.
- Use **Section A2** where site investigation and/or remediation has been completed and a conclusion can be drawn on the suitability of land uses **with the implementation** of an active or passive environmental management plan.
- Use **Section B** where the audit is to determine:
  - (B1) the nature and extent of contamination, and/or
  - (B2) the appropriateness of an investigation, remediation or management plan[1], and/or
  - (B3) the appropriateness of a site testing plan in accordance with the *Temporary Water Restrictions Order for the Botany Sands Groundwater Source 2017*, and/or
  - (B4) whether the terms of the approved voluntary management proposal or management order have been complied with, and/or
  - (B5) whether the site can be made suitable for a specified land use (or uses) if the site is remediated or managed in accordance with the implementation of a specified plan.

[1] For simplicity, this statement uses the term 'plan' to refer to both plans and reports.

~~Section A1~~

~~I certify that, in my opinion:~~

~~The **site is suitable** for the following uses:~~

~~(Tick all appropriate uses and strike out those not applicable.)~~

- ☐ ~~Residential, including substantial vegetable garden and poultry~~
- ☐ ~~Residential, including substantial vegetable garden, excluding poultry~~
- ☐ ~~Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~
- ☐ ~~Day care centre, preschool, primary school~~
- ☐ ~~Residential with minimal opportunity for soil access, including units~~
- ☐ ~~Secondary school~~
- ☐ ~~Park, recreational open space, playing field~~
- ☐ ~~Commercial/industrial~~
- ☐ ~~Other (please specify):~~

_____

~~OR~~

- ☐ ~~I certify that, in my opinion, the **site is not suitable** for any use due to the risk of harm from contamination.~~

~~Overall comments:~~

_____

_____

_____

Section A2

~~I certify that, in my opinion:~~

~~Subject to compliance with the **attached** environmental management plan[2] (EMP), the site is suitable for the following uses:~~

~~(Tick all appropriate uses and strike out those not applicable.)~~

- ☐ ~~Residential, including substantial vegetable garden and poultry~~
- ☐ ~~Residential, including substantial vegetable garden, excluding poultry~~
- ☐ ~~Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~
- ☐ ~~Day care centre, preschool, primary school~~
- ☐ ~~Residential with minimal opportunity for soil access, including units~~
- ☐ ~~Secondary school~~
- ☐ ~~Park, recreational open space, playing field~~
- ☐ ~~Commercial/industrial~~
- ☐ ~~Other (please specify):~~

_____

~~EMP details~~

~~Title~~

~~Author~~

~~Date~~ ~~No. of pages~~

~~EMP summary~~

~~This EMP (attached) is required to be implemented to address residual contamination on the site.~~

~~The EMP: (Tick appropriate box and strike out the other option.)~~

- ☐ ~~requires operation and/or maintenance of **active** control systems[3]~~
- ☐ ~~requires maintenance of **passive** control systems only[3].~~

[2] Refer to Part IV for an explanation of an environmental management plan.
[3] Refer to Part IV for definitions of active and passive control systems.

~~Purpose of the EMP:~~

~~Description of the nature of the residual contamination:~~

~~Summary of the actions required by the EMP:~~

~~How the EMP can reasonably be made to be legally enforceable:~~

~~How there will be appropriate public notification:~~

~~Overall comments:~~

~~Section B~~

Purpose of the plan[4] which is the subject of this audit:

Document site conditions in relation to previously detected and potential ACM impacts, and provide measures for the safe management of potential ACM that may be encountered during development works and remediation/validation of site areas as required.

I certify that, in my opinion:

(B1)

☑ The nature and extent of the contamination **has** been appropriately determined

~~☐ The nature and extent of the contamination **has not** been appropriately determined~~

AND/OR (B2)

☑ The investigation, remediation or management plan **is** appropriate for the purpose stated above

~~☐ The investigation, remediation or management plan **is not** appropriate for the purpose stated above~~

~~AND/OR (B3)~~

~~☐ The site testing plan:~~

~~☐ **is** appropriate to determine~~

~~☐ **is not** appropriate to determine~~

~~if groundwater is safe and suitable for its intended use as required by the *Temporary Water Restrictions Order for the Botany Sands Groundwater Resource 2017*~~

~~AND/OR (B4)~~

~~☐ The terms of the approved voluntary management proposal* or management order** (strike out as appropriate):~~

~~☐ **have** been complied with~~

~~☐ **have not** been complied with.~~

~~*voluntary management proposal no.~~

~~**management order no.~~

AND/OR (B5)

☑ The site **can be made suitable** for the following uses:

(Tick all appropriate uses and strike out those not applicable.)

~~☐ Residential, including substantial vegetable garden and poultry~~

~~☐ Residential, including substantial vegetable garden, excluding poultry~~

[4] For simplicity, this statement uses the term 'plan' to refer to both plans and reports.

- ~~☐ Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~
- ☑ Day care centre, preschool, primary school
- ☑ Residential with minimal opportunity for soil access, including units
- ☑ Secondary school
- ☑ Park, recreational open space, playing field
- ☑ Commercial/industrial
- ☑ Other (please specify):
  - retail
  - hotel
  - child care facilities
  - community

IF the site is ~~remediated~~/managed* in accordance with the following plan (**attached**):

*Strike out as appropriate

Plan title	**Asbestos Management Plan**		
Plan author	**Environmental Resources Management Australia Pty Ltd**		
Plan date	**8 November 2022**	No. of pages	**35**

SUBJECT to compliance with the following condition(s):

-

Overall comments:

- The site investigation works (ERM 2021b and ERM 2022c) are considered to have met the requirements of the *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd Edition)* (EPA 2017).
- The soil investigations identified elevated concentrations of heavy metals above the adopted EILs in shallow fill or natural material which are considered representative of natural background conditions and unlikely to pose risks for current or future land uses. Similarly, concentrations of heavy metals exceeding the adopted site criteria detected in groundwater and surface water samples are not considered to be indicative of anthropogenic impacts and do not require further assessment.
- Assessment of groundwater conditions did not identify levels of the identified contaminants of potential concern in groundwater which are considered to require remediation or management under the proposed uses.
- Assessment of surface water and sediment conditions did not identify levels of the identified contaminants of potential concern which are considered to require management under the proposed uses.

- While ACM was not identified at the site during the recent site investigations (ERM 2021b and 2022c), there is potential for asbestos impact to exist in fill materials (particularly around the former Married Quarters) and in on-site service pits/conduits. Implementation of an AMP is required during development of the site to manage any unexpected finds.

- Consideration of aesthetic issues including staining, odours, anthropogenic contaminants and presence of asbestos has been adequately addressed in the assessment of soils at the site.

- The AMP (ERM 2022b) prepared for the site addresses the identified contamination issue; with the site management approach documented in the AMP checked by the auditor and found to be: technically feasible; environmentally justifiable given the nature and extent of the identified potential contamination; and consistent with relevant laws, policies and guidelines.

- The auditor notes that the site management and validation procedures outlined in the AMP (ERM 2022b) are considered appropriate to make the site suitable for the proposed Public open space/recreation and mixed uses including medium to high density residential, commercial/industrial, retail, hotel, child care facilities, community and education, subject to the following requirements:
    - Any amendments to the AMP that result in changes to site management will be required to be reviewed and endorsed by the site auditor prior to implementation.
    - Appropriate supervision by an Environmental Consultant and / or Occupational Hygienist during any asbestos management works.
    - A validation report is prepared in accordance with relevant EPA requirements confirming the suitability of the site for the intended landuses prior to occupation of the site.

Part III: Auditor's declaration

I am accredited as a site auditor by the NSW Environment Protection Authority (EPA) under the *Contaminated Land Management Act 1997.*

Accreditation no. **0503**

I certify that:

- I have completed the site audit free of any conflicts of interest as defined in the *Contaminated Land Management Act 1997,* and
- with due regard to relevant laws and guidelines, I have examined and am familiar with the reports and information referred to in Part I of this site audit, and
- on the basis of inquiries I have made of those individuals immediately responsible for making those reports and obtaining the information referred to in this statement, those reports and that information are, to the best of my knowledge, true, accurate and complete, and
- this statement is, to the best of my knowledge, true, accurate and complete.

I am aware that there are penalties under the *Contaminated Land Management Act 1997* for wilfully making false or misleading statements.

Signed

Date 15 November 2022

Part IV: Explanatory notes

To be complete, a site audit statement form must be issued with all four parts.

How to complete this form

Part I

Part I identifies the auditor, the site, the purpose of the audit and the information used by the auditor in making the site audit findings.

Part II

Part II contains the auditor's opinion of the suitability of the site for specified uses or of the appropriateness of an investigation, or remediation plan or management plan which may enable a particular use. It sets out succinct and definitive information to assist decision-making about the use or uses of the site or a plan or proposal to manage or remediate the site.

The auditor is to complete either Section A1 or Section A2 or Section B of Part II, **not** more than one section.

Section A1

In Section A1 the auditor may conclude that the land is *suitable* for a specified use or uses OR *not suitable* for any beneficial use due to the risk of harm from contamination.

By certifying that the site is *suitable*, an auditor declares that, at the time of completion of the site audit, no further investigation or remediation or management of the site was needed to render the site fit for the specified use(s). **Conditions must not be** imposed on a Section A1 site audit statement. Auditors may include **comments** which are key observations in light of the audit which are not directly related to the suitability of the site for the use(s). These observations may cover aspects relating to the broader environmental context to aid decision-making in relation to the site.

Section A2

In Section A2 the auditor may conclude that the land is *suitable* for a specified use(s) subject to a condition for implementation of an environmental management plan (EMP).

Environmental management plan

Within the context of contaminated sites management, an EMP (sometimes also called a 'site management plan') means a plan which addresses the integration of environmental mitigation and monitoring measures for soil, groundwater and/or hazardous ground gases throughout an existing or proposed land use. An EMP succinctly describes the nature and location of contamination remaining on site and states what the objectives of the plan are, how contaminants will be managed, who will be responsible for the plan's implementation and over what time frame actions specified in the plan will take place.

By certifying that the site is suitable subject to implementation of an EMP, an auditor declares that, at the time of completion of the site audit, there was sufficient information satisfying guidelines made or approved under the *Contaminated Land Management Act 1997*

(CLM Act) to determine that implementation of the EMP was feasible and would enable the specified use(s) of the site and no further investigation or remediation of the site was needed to render the site fit for the specified use(s).

Implementation of an EMP is required to ensure the site remains suitable for the specified use(s). The plan should be legally enforceable: for example, a requirement of a notice under the CLM Act or a development consent condition issued by a planning authority. There should also be appropriate public notification of the plan, e.g. on a certificate issued under s.149 of *the Environmental Planning and Assessment Act 1979*.

Active or passive control systems

Auditors must specify whether the EMP requires operation and/or maintenance of active control systems or requires maintenance of passive control systems only. Active management systems usually incorporate mechanical components and/or require monitoring and, because of this, regular maintenance and inspection are necessary. Most active management systems are applied at sites where if the systems are not implemented an unacceptable risk may occur. Passive management systems usually require minimal management and maintenance and do not usually incorporate mechanical components.

Auditor's comments

Auditors may also include **comments** which are key observations in light of the audit which are not directly related to the suitability of the site for the use(s). These observations may cover aspects relating to the broader environmental context to aid decision-making in relation to the site.

Section B

In Section B the auditor draws conclusions on the nature and extent of contamination, and/or suitability of plans relating to the investigation, remediation or management of the land, and/or the appropriateness of a site testing plan in accordance with the *Temporary Water Restrictions Order for the Botany Sands Groundwater Source 2017*, and/or whether the terms of an approved voluntary management proposal or management order made under the CLM Act have been complied with, and/or whether the site can be made suitable for a specified land use or uses if the site is remediated or managed in accordance with the implementation of a specified plan.

By certifying that a site *can be made suitable* for a use or uses if remediated or managed in accordance with a specified plan, the auditor declares that, at the time the audit was completed, there was sufficient information satisfying guidelines made or approved under the CLM Act to determine that implementation of the plan was feasible and would enable the specified use(s) of the site in the future.

For a site that *can be made suitable*, any **conditions** specified by the auditor in Section B should be limited to minor modifications or additions to the specified plan. However, if the auditor considers that further audits of the site (e.g. to validate remediation) are required, the auditor must note this as a condition in the site audit statement. The condition must not specify an individual auditor, only that further audits are required.

Auditors may also include **comments** which are observations in light of the audit which provide a more complete understanding of the environmental context to aid decision-making in relation to the site.

Part III

In **Part III** the auditor certifies their standing as an accredited auditor under the CLM Act and makes other relevant declarations.

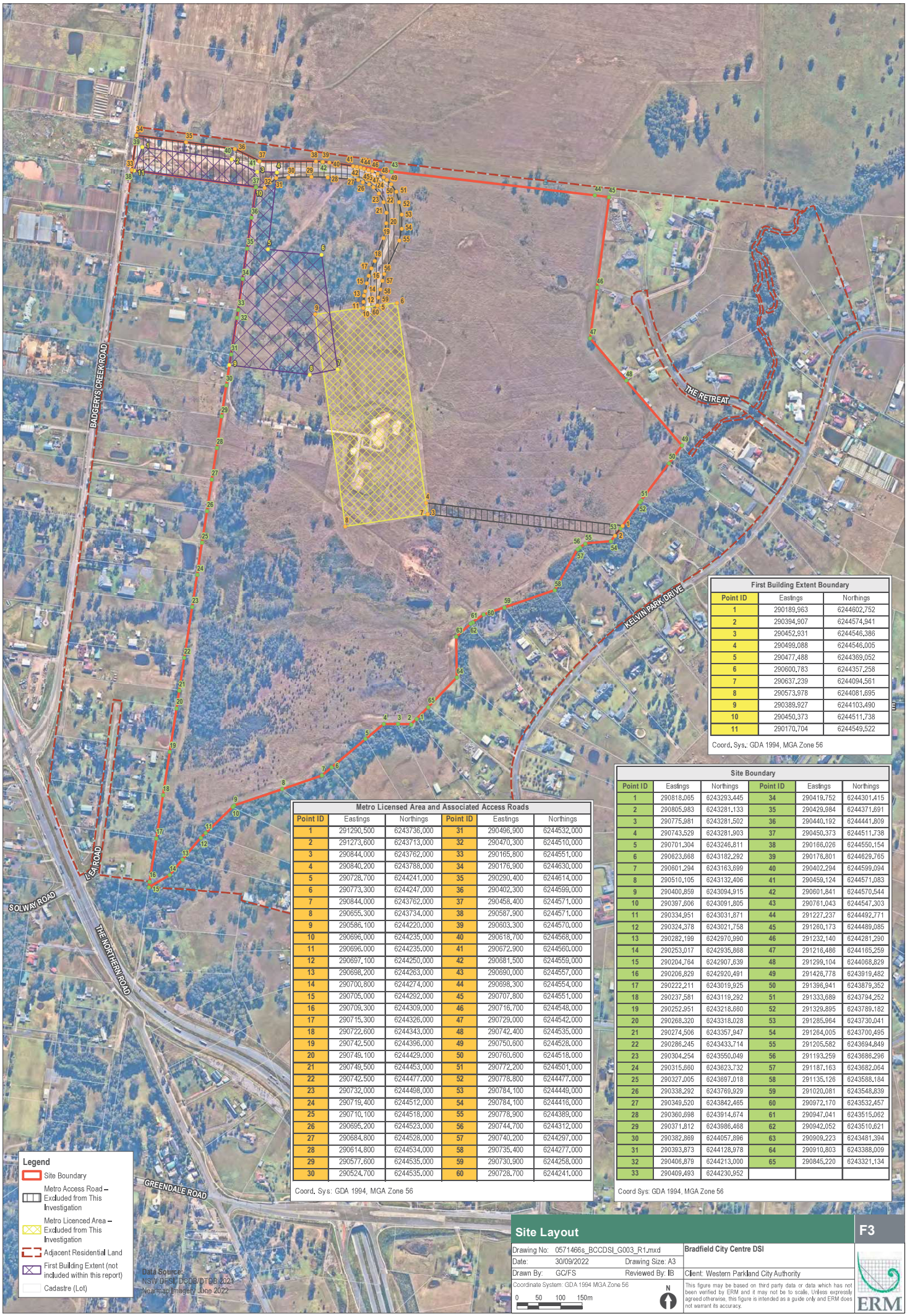
Where to send completed forms

In addition to furnishing a copy of the audit statement to the person(s) who commissioned the site audit, statutory site audit statements must be sent to

- the **NSW Environment Protection Authority**: nswauditors@epa.nsw.gov.au or as specified by the EPA

AND

- the **local council** for the land which is the subject of the audit.



First Building Extent Boundary

Point ID	Eastings	Northings
1	290189.963	6244602.752
2	290394.907	6244574.941
3	290452.931	6244546.386
4	290499.088	6244546.005
5	290477.488	6244369.052
6	290600.783	6244357.258
7	290637.239	6244094.561
8	290573.978	6244081.695
9	290389.927	6244103.490
10	290450.373	6244511.738
11	290170.704	6244549.522

Coord. Sys.: GDA 1994, MGA Zone 56

Metro Licensed Area and Associated Access Roads

Point ID	Eastings	Northings	Point ID	Eastings	Northings
1	291290.500	6243736.000	31	290496.900	6244532.000
2	291273.600	6243713.000	32	290470.300	6244510.000
3	290844.000	6243762.000	33	290165.800	6244551.000
4	290840.200	6243788.000	34	290176.900	6244630.000
5	290728.700	6244241.000	35	290290.400	6244614.000
6	290773.300	6244247.000	36	290402.300	6244599.000
7	290844.000	6243762.000	37	290458.400	6244571.000
8	290655.300	6243734.000	38	290587.900	6244571.000
9	290586.100	6244220.000	39	290603.300	6244570.000
10	290696.000	6244235.000	40	290618.700	6244568.000
11	290696.000	6244235.000	41	290672.900	6244560.000
12	290697.100	6244250.000	42	290681.500	6244559.000
13	290698.200	6244263.000	43	290690.000	6244557.000
14	290700.800	6244274.000	44	290698.300	6244554.000
15	290705.000	6244292.000	45	290707.800	6244551.000
16	290709.300	6244309.000	46	290716.700	6244548.000
17	290715.300	6244326.000	47	290729.000	6244542.000
18	290722.600	6244343.000	48	290742.400	6244535.000
19	290742.500	6244396.000	49	290750.600	6244528.000
20	290749.100	6244429.000	50	290760.600	6244518.000
21	290749.500	6244453.000	51	290772.200	6244501.000
22	290742.500	6244477.000	52	290778.800	6244477.000
23	290732.000	6244498.000	53	290784.100	6244449.000
24	290719.400	6244512.000	54	290784.100	6244416.000
25	290710.100	6244518.000	55	290778.900	6244389.000
26	290695.200	6244523.000	56	290744.700	6244312.000
27	290684.800	6244528.000	57	290740.200	6244297.000
28	290614.800	6244534.000	58	290735.400	6244277.000
29	290577.600	6244535.000	59	290730.900	6244258.000
30	290524.700	6244535.000	60	290728.700	6244241.000

Coord. Sys: GDA 1994, MGA Zone 56

Site Boundary

Point ID	Eastings	Northings	Point ID	Eastings	Northings
1	290818.065	6243293.445	34	290419.752	6244301.415
2	290805.983	6243281.133	35	290429.984	6244371.691
3	290775.981	6243281.502	36	290440.192	6244441.809
4	290743.529	6243281.903	37	290450.373	6244511.738
5	290701.304	6243246.811	38	290166.026	6244550.154
6	290623.668	6243182.292	39	290176.801	6244629.765
7	290601.294	6243163.699	40	290402.294	6244599.094
8	290510.105	6243132.406	41	290459.124	6244571.083
9	290400.859	6243094.915	42	290601.841	6244570.544
10	290397.606	6243091.805	43	290761.043	6244547.303
11	290334.951	6243031.871	44	291227.237	6244492.771
12	290324.378	6243021.758	45	291260.173	6244489.085
13	290282.199	6242970.990	46	291232.140	6244281.290
14	290253.017	6242935.868	47	291216.486	6244165.259
15	290204.764	6242907.639	48	291299.104	6244068.829
16	290206.829	6242920.491	49	291426.778	6243919.482
17	290222.211	6243019.925	50	291396.941	6243879.352
18	290237.581	6243119.292	51	291333.689	6243794.252
19	290252.951	6243218.660	52	291329.895	6243789.182
20	290268.320	6243318.028	53	291285.964	6243730.041
21	290274.506	6243357.947	54	291264.005	6243700.495
22	290286.245	6243433.714	55	291205.582	6243694.849
23	290304.254	6243550.049	56	291193.259	6243686.296
24	290315.660	6243623.732	57	291187.163	6243682.064
25	290327.005	6243697.018	58	291135.126	6243588.184
26	290338.292	6243769.929	59	291020.081	6243548.839
27	290349.520	6243842.465	60	290972.170	6243532.457
28	290360.698	6243914.674	61	290947.041	6243515.062
29	290371.812	6243986.468	62	290942.052	6243510.621
30	290382.869	6244057.896	63	290909.223	6243481.394
31	290393.873	6244128.978	64	290910.803	6243388.009
32	290406.879	6244213.000	65	290845.220	6243321.134
33	290409.493	6244230.952			

Coord Sys: GDA 1994, MGA Zone 56

Site Layout

F3

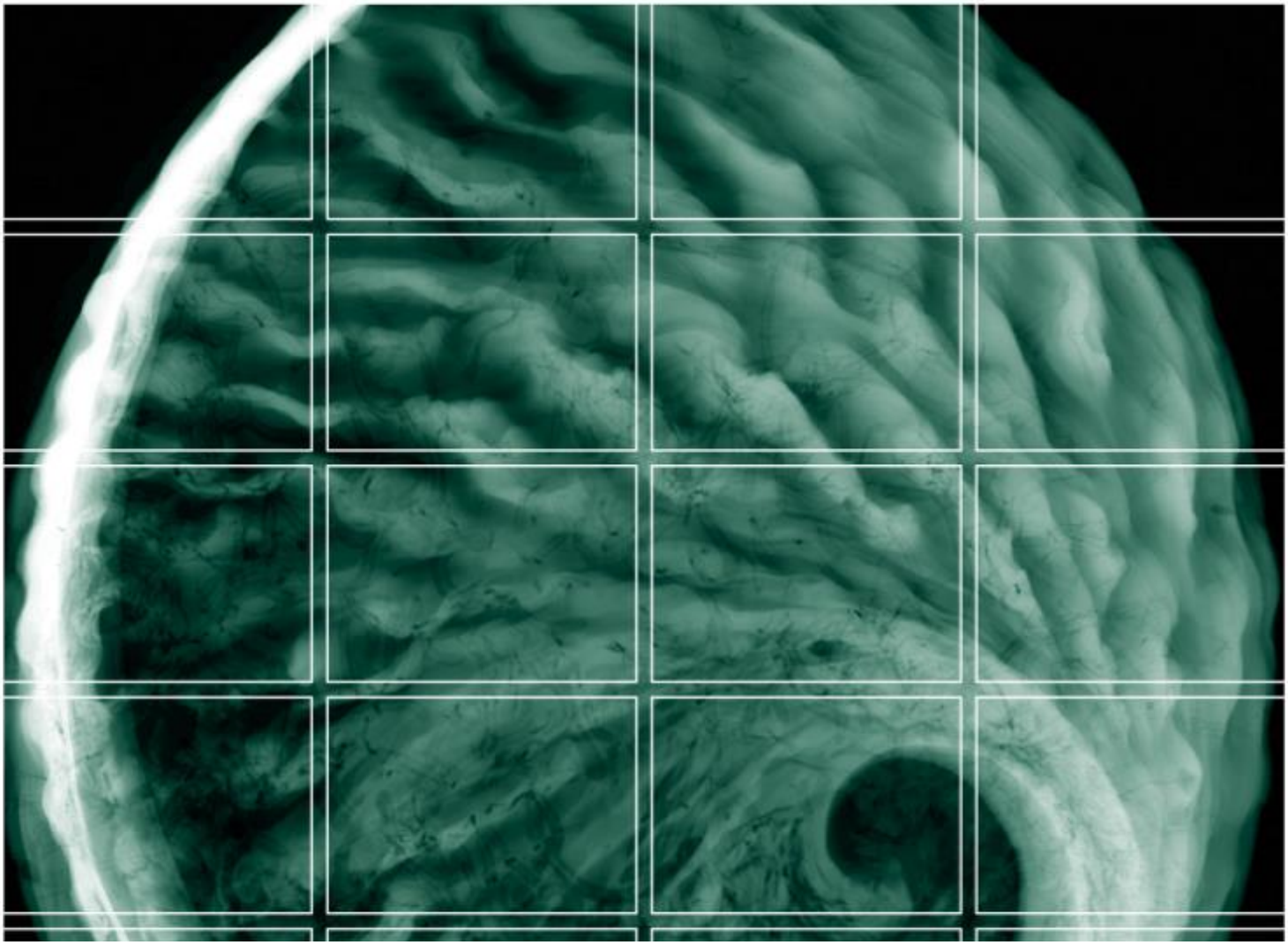
Drawing No: 0571466s_BCCDSI_G003_R1.mxd
Date: 30/09/2022 Drawing Size: A3
Drawn By: GC/FS Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 50 100 150m
N

Bradfield City Centre DSI

Client: Western Parkland City Authority

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM



Asbestos Management Plan

Bradfield City Centre

8 November 2022

Project No.: 0571466

The business of sustainability

Document details	
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Document history

				ERM approval to issue		
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Signature Page

8 November 2022

Asbestos Management Plan

Bradfield City Centre

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Acronyms and Abbreviations

Acronym	Definition
ACT	Australian Capital Territory
AHD	Australian Height Datum
AMG	Australian Map Grid
ANZECC	Australian and New Zealand Environment and Conservation Council
CoPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
EPA	Environment Protection Authority
ESL	Ecological Screening Level
LAA	Licensed Asbestos Assessor
LOR	Limit of Reporting
m	Metre
m^3	Cubic Metres
m AHD	Metres Australian Height Datum
m bgl	Metres Below Ground Level
MGA	Map Grid of Australia
MPC	Major Projects Canberra
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
PID	Photo-Ionisation Detector
QA	Quality Assurance
QC	Quality Control
RAP	Remedial Action Plan
RPD	Relative Percentage Difference
SAQP	Sampling Analysis and Quality Plan
WPCA	Western Parkland City Authority

EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by the Western Parkland City Authority (WPCA, or 'the Client') to develop an Asbestos Management Plan (AMP) for the Site identified as the Bradfield Development Area, located at 215 Badgerys Creek Road, Bringelly NSW (the Site).

Asbestos Containing Material (ACM) was reported to have been previously identified during investigations undertaken by Golder Associates in 2011 within a portion of the Site identified as the "former married quarters" (Appendix A – Figure 2). ERM notes that field observations and laboratory analysis undertaken during recent investigations undertaken by Western Environmental in 2019 and ERM in 2022 did not identify evidence of asbestos impacts within the Site, including within the former married quarters.

Given the extensive sampling undertaken throughout the Site as part of previous investigations, it is anticipated that any unexpected finds of ACM that might be identified during future works would be limited to isolated pockets of ACM within surface fill soils or ACM within service pits and conduits on the Site.

The specific objectives of this AMP are therefore to:

- Summarise background environmental information and possible or likely conditions at the Site;
- Document the current status of the Site regarding previously identified ACM impact;
- Provide procedures for asbestos removal, should ACM be encountered during Site works;
- Provide criteria for asbestos clearance/validation should ACM removal occur during works;
- Provide Asbestos Clearance/Validation procedures to be followed should ACM removal works occur;
- Discuss safety measures / considerations for dealing with potentially contaminated soil / fill material; and
- Provide general environmental requirements for undertaking works within the Site.

All work related to the excavation, movement, handling and disposal of any unexpected finds of ACM should be undertaken in accordance with the requirements of this AMP and in compliance with relevant legislation detailed within **Section 3**.

Potential Residual Contamination at the Site

The Site in its current form poses a low risk of harm to human health and / or sensitive environmental receptors. This AMP has been prepared to manage the risk from potential unexpected finds of ACM.

Asbestos Management Requirements

Any works undertaken within the Site involving the management of unexpected finds of ACM impacted fill materials are to be undertaken in accordance with this AMP.

The primary control measure for the management of potential ACM contamination within the Site is ensuring that all potentially ACM contaminated fill materials located within the Site are appropriately disposed offsite or managed within onsite containment areas.

ERM notes that where ACM impacted fill is identified, upon completion of offsite disposal / onsite containment a validation report is required to be prepared by a suitably qualified environmental professional and reviewed / endorsed by the nominated NSW EPA accredited Site Auditor.

1. INTRODUCTION AND OBJECTIVES

1.1 Introduction

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by the Western Parkland City Authority (WPCA, or 'the Client') to develop an Asbestos Management Plan (AMP) for the Site identified as the Bradfield Development Area, located at 215 Badgerys Creek Road, Bringelly NSW (the Site – refer to Figure 1 of Appendix A).

Asbestos Containing Material (ACM) was previously reported in an investigation undertaken by Golder Associates in 2011 in a portion of the Site identified as the "former married quarters" (Figure 2 of Appendix A). ERM notes that field observations and laboratory analysis undertaken during two more recent investigations by Western Environmental in 2019 and ERM in 2022 did not identify evidence of asbestos impacts within the Site, including within the former married quarters.

- The most likely remediation option for any unexpected finds of ACM identified during the development of the Site will be excavation and offsite disposal, as it is envisioned that any unexpected finds will be small in volume.
- While significant volume of ACM impacted soils are considered unlikely, where large volumes of ACM impacted fill are identified during construction works that would result in significant costs for offsite disposal the potential for **onsite containment of impacted soils may be considered**.
- It is noted that at the time of this AMP, the final site layout / design levels had not been finalised and as such, the location, design etc. for a potential containment cell would be developed at a later time. It is further noted that where onsite containment is required, the specific location, suitably of materials and containment cell design would require review and approval by a NSW EPA accredited Site Auditor.

1.2 Objectives

The specific objectives of this AMP are to:

- Summarise background environmental information and possible or likely conditions at the Site;
- Document the current status of the Site regarding previously identified ACM impact;
- Provide procedures for asbestos removal, should ACM be encountered during Site works;
- Provide criteria for asbestos clearance/validation should ACM removal occur during works;
- Provide Asbestos Clearance/Validation procedures to be followed should ACM removal works occur;
- Discuss safety measures / considerations for dealing with potentially contaminated soil / fill material; and
- Provide general environmental requirements for undertaking works within the Site.

1.3 AMP Revision

WPCA is responsible for ensuring that all required stakeholders are provided with the current revision of this AMP. The current revision of this AMP is detailed within the table below. Updates to this document must be undertaken in accordance with the requirements detailed within **Section2.3**.

- WPCA is responsible for any subsequent revisions of this AMP. All subsequent revisions must include a clear date / revision identifier and details of the revisions to ensure the most current version of the AMP is implemented.

Document Name	Document Revision Number	Date
Asbestos Management Plan – Bradfield City Centre	Revision 2	18/10/2022

2. APPLICATION AND RESPONIBILITIES

2.1 Application of AMP

Due to the potential for ACM to be present both within underlying soils and on the Site surface, the AMP has been developed to provide ongoing management of potential asbestos contamination within the Site and will be applied immediately upon the initiation of any works within the Site, which may involve the following activities:

- Excavation of fill and natural soil materials to facilitate maintenance, realignment and construction of any subsurface infrastructure;
- Construction of any subsurface site infrastructure;
- Temporary stockpiling of excavated material resulting from onsite intrusive works;
- Off-site disposal of any waste soil / fill materials (if required); and
- Any other forms of soil / ground disturbance that may disturb or encounter ACM at or beneath the soil surface.

2.2 Responsibilities

The responsibilities for the measures outlined within this AMP are details below.

Position and Company	Responsibilities
Site Auditor	■ Approve the AMP. ■ Review and approval of any subsequent revisions of the AMP
Land Custodian	■ Implement this AMP. ■ Require all contractors and sub-contractors comply with the AMP and statutory and license requirements.
Site Superintendent (if required)	■ Maintain records of all works undertaken within the Site as required within this AMP ■ Provide all required information relating to soil disposal to the Land Custodian.
Site Contractor	■ Implement this AMP.
	■ Ensure all personnel are inducted into the requirements of this AMP.
	■ Where required, engage a suitably qualified environmental specialist (or professional) and / or occupational hygienist / Licenced Asbestos Assessor (LAA) to undertake sample collection, reporting and other works designated within this AMP.
	■ Oversee overall implementation of AMP and undertake monitoring and inspections of the Site as required.
	■ As required, undertake site inspections and monitoring of the Site operations to ensure they are carried out in an environmentally responsible manner.
	■ Monitor the environmental protection measures put in place to assess if they are appropriate and functioning properly.
	■ Assess any unexpected finds.
	■ Notify the land custodian and / or superintendent of any significant environmental issues.
	■ Notify the Land Custodian of any significant environmental issues
	■ Comply with the relevant conditions of the consents and licenses (i.e. comply with all regulatory requirements).
	■ Complete all necessary registers, databases, and records required in the AMP.

Position and Company	Responsibilities
	■ Conduct all site operations in an environmentally responsible manner on a day to day basis.
	■ Meet all OH&S regulatory requirements.
	■ Provide adequate training of all employees and contractors during site induction, and as required on an ongoing basis during the works.
	■ Complete non-conformance and corrective action reports, and follow up as required.
	■ Complete incident reports and complaint reports, and follow up as required.
	■ Conduct monitoring as required in the AMP.
	■ Undertake audits of the project activities in accordance with the requirements of the AMP.
	■ Ensure all non-conformance and/or complaints are reported to the Superintendent.
Licensed Asbestos Removalist	■ An entity licensed to carry out Class A or Class B asbestos removal work in NSW.
Environmental Consultant	■ The entity engaged to assess the Site for contamination and, where required, to develop a remediation plan, implement the plan and validate the remediation.
Competent Person	■ A person who has acquired through training, qualification or experience, the knowledge and skills related asbestos removal industry practice to carry out clearance inspections of asbestos removal areas. ■ An independent competent person is required to conduct asbestos clearance inspections for bonded asbestos removal works.
Licensed Asbestos Assessor	■ An independent Licensed Asbestos Assessor is required to conduct asbestos clearance inspections for friable asbestos removal works. ■ A Licensed Asbestos Assessor is also considered to be a Competent Person for the purposed of bonded asbestos clearance inspections.

2.3 Document Revision

This AMP may be regularly reviewed and updated as necessary. Therefore, it is the responsibility of the reader of this document to ensure they have the current version of the AMP.

Where onsite works vary from expected or where inspections / audits (identify that the AMP requires updating, a suitably qualified environmental specialist (or professional) will update the AMP as required.

- ERM notes that where the AMP requires updating, all changes / amendments must be undertaken by a suitably qualified environmental specialist (or professional) and approved / endorsed by an NSW EPA approved Site Auditor prior to implementation.

The master document, with the up-to-date version of the AMP will be available from WPCA.

3. STATUTORY REQUIREMENTS

During the course of works, all works within the Site shall comply with the applicable environmental and occupational health and safety (OH&S) regulatory requirements in the New South Wales (NSW) at the time of work, and in particularly to those related to asbestos and asbestos management.

3.1 Legislation and Codes of Practice

Asbestos exposure, both personal and to the environment is covered generally by the requirements of SafeWork NSW Codes of Practices and NOHSC Guidance Notes: The guidelines most relevant to this AMP are:

- Code of Practice: How to Safely Remove Asbestos (SafeWork NSW, 2019);
- Code of Practice: How to Manage and Control Asbestos in the Workplace (SafeWork NSW, 2019); and
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres (NOHSC:3003 (2005)).

Other relevant regulatory guidelines relevant to the assessment and disposal of ACM impacted fill and potential site suitability requirements for the Site include:

- Australian Standard (2005). AS 4482.1 2005, Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 2: Non-volatile and Semi-volatile compounds;
- Australian Standard (1999). AS 4482.2 1999, Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances;
- National Environment Protection Council (2013). National Environment Protection (Assessment of Site Contamination) Measure 1999. This is hereafter referred to as ‘the ASC NEPM;
- WA Department of Health (2021). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia;
- NSW EPA (2017) Guidelines for the NSW Site Auditor Scheme (3rd edition); and
- NSW EPA (2020) Consultants reporting on contaminated land, contaminated land guidelines.

Other relevant legislation guidelines relevant to the assessment and disposal of ACM impacted fill and potential site suitability requirements for the Site include:

- NSW WHS Act 2011;
- NSW WHS Regulation 2017;
- Environmentally Hazardous Chemicals Regulation 1999;
- Protection of the Environment Operations (Waste) Regulation 2005;
- Protection of the Environment Operations Act 1997;
- Protection of the Environment Operations (General) Regulation 2009;
- Protection of the Environment Operations (Waste) Regulation 2014;
- Contaminated Land Management Act 1997; and
- State Environmental Planning Policy (Resilience and Hazards) 2021.

ERM notes that in response to the WA Department of Health (2021). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, the NSW EPA issued a position statement that the processes and procedures for assessment, management and remediation of ACM impacted fill materials is considered to not be wholly consistent with the position of the NSW EPA.

ERM notes that in the event that unexpected fids of asbestos were made and remediation of ACM impacted fill was subsequently required to be undertaken within the Site, all works must be undertaken in accordance with the above regulations / guidelines made or endorsed by the NSW EPA or updated approved guidance at the time of those works.

3.2 Definitions

Definitions regarding the friable or bonded nature of ACM is provided within the *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW 2019). The definitions for friable and non-friable asbestos provided in that document are as follows:

- **Friable Asbestos**: Material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos; and,
- **Non-Friable Asbestos**: Material containing asbestos that is not friable asbestos, including material containing asbestos fibres reinforced with a bonding compound (also known as bonded asbestos).

The friable or bonded nature of asbestos fragment materials within the *National Environment Protection (Assessment of Site Contamination) Measure 1999*(NEPC, 2013) is defined as follows:

- **Bonded ACM (bonded Asbestos)**: Asbestos-containing-material which is in sound condition and where the asbestos is bound in a matrix such as cement or resin (e.g. asbestos fencing and vinyl tiles). Bonded ACM refers to, in this instance, material that cannot pass a mm x 7 mm sieve.
- **Fibrous Asbestos (FA)**: Friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This material is in a condition such that it can be broken or crumbled by hand pressure.
- **Asbestos Fines (AF)**: AF includes free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve.

4. SITE DESCRIPTION AND BACKGROUND INFORMATION

4.1 Site Identification

Site identification information is presented in **Table 1** below

Table 1: Site Identification Details

Item	Detail
Site Address	215 Badgerys Creek Rd, Bringelly NSW 2556
Lot and Deposited Plan	Part Lot 101 DP1282949
Local Government Authority	Liverpool City Council
Zoning	The majority of the Site is zoned as MU (Mixed Use) with the Southern and Eastern boundary of The Site zoned as ENZ (Environment and Recreation). The North Western portion of the Site is zoned as ENT (Enterprise) under the State Environmental Planning Policy (Precincts – Western Parkland City) 2021.
Site Area	Approximately 94.56 hectares (ha) (Excluding First building area and Sydney Metro site area and access roads)
Site Location	Refer to **Figure 1**
Site Layout	Refer to **Figure 2**

4.2 Site Setting

A summary of the Site setting, documented in the PSI and DSI is provided in **Table 2**.

Table 2: Site Identification Details

Item	Description
Historical and Current land-use	■ The Site forms part of the larger lot (Lot 101) acquired by the Commonwealth in 1959 for use as the Royal Australian Air Force (RAAF) Bringelly Radio Receiving Station. The Bringelly Radio Receiving Station closed in 2005. ■ The Site was acquired by WPCA from the Commonwealth in 2020. The buildings associated with the former Radio Receiving Station were demolished in works which took place during February and March of 2022. ERM notes that the former radio receiving station buildings were located within the central compound within the Sydney Metro site area and are excluded from this investigation.
Surrounding Land use	The land uses surrounding the Site include: ■ North: Directly north of the Site is agricultural land followed by low density/semi-rural residence (approximately 290 m north of the Site). Residential properties are located approximately 550 m north of the Site and beyond. The north western boundary of the Site forms part of the wider Bradfield City Centre land and is comprised of the area identified as Priority Area 1 which is subject to a separate investigation. ■ South: Directly south of the Site is a strip of vegetation followed by Thompsons Creek located approximately 40 m south of the Site. An area of rural residential housing lies beyond Thompsons Creek. ■ East: Thompsons Creek runs along the majority of the eastern border of the Site beyond which is The Retreat Road located approximately 115 m east of the Site. Residential properties are located approximately 150 m to the east of the Site and beyond. ■ West: Directly west of the Site are residential properties which extend for approximately 500 m and beyond. ERM notes that the central and northern portion of the proposed Bradfield City Centre is comprised of the Sydney Metro works area and excluded from this AMP.

Item	Description
Site Elevation	■ Based on topographical data obtained as part of an information search conducted during the PSI (ERM, 2021), the Site slopes generally to the east. ■ The highest elevation on site is approximately 78 m AHD on the western boundary of the Site. The lowest elevation is approximately 60 m AHD on the eastern boundary of the Site.
Topography	■ Topography within the surrounding area is variable with gentle/undulating slopes generally in a South Easterly direction.
Hydrology	■ The nearest surface water body to the Site is Moore Gully which crosses the western boundary of the Site and enters Thompsons Creek at the eastern boundary of the Site. ■ Five unnamed ephemeral drainage lines are indicated on Site mapping to flow through the Site and into Thompsons Creek to the South and East. ■ Thompsons Creek is a South Creek tributary with the confluence between the two creeks occurring approximately 1.3 km North-East of the Site.
Geology, Soils and Acid Sulfate Soils	■ The Penrith 1:100,000 Geological Mapping Sheet identifies the underlying geology as Bringelly Shale and is described as shale, carbonaceous claystone, claystone, laminite, fine to medium grained lithic sandstone, rare coal and tuff from the Middle Triassic age. ■ The soil landscape of the Site is described as ridge and valley country of gently undulating ridge tops and steep side slopes often with slumping and rounded hilly to steep hilly areas and relatively narrow valleys. Chief soils are hard acidic red soils (with hard acidic yellow mottled soils in places some ironstone gravels occur in both these soils. Associated are hard neutral and alkaline red soils and in saddles and some mid-slope positions soils, usually in depressions; and small areas of undescribed soils in wet soaks and valley areas. Small areas of other soils are likely throughout. This is consistent with site observations during the DSI where site soils were mostly noted to be red, grey and brown clays with minor shale inclusions, and finer tan / grey clays in low-lying areas near natural drainage lines. ■ According to the Atlas of Australian Acid Sulfate Soils (ASS), ASS onsite and within the search buffer have an extremely low probability of occurrence. There is a 1-5% chance of occurrence with occurrences in small, localised areas.
Hydrogeology	■ Previous investigations undertaken within the Site by ERM in 2021 identified groundwater at variable depths ranging from approximately 2.5 m bgl to 13 m bgl within underlying fractured shale bedrock (Bringelly Shale). ■ A search of registered groundwater bores identified five groundwater bores within the Site boundary. All bores were reported to be drilled for monitoring purposes. An additional eight registered groundwater bores are found within a 2km buffer zone from the Site. ■ Two of the bores within the buffer zone were reported to be drilled for domestic/stock purposes, three are reported to be drilled for monitoring purposes, one for domestic/industrial/stock purposes and one for domestic purposes. ■ Aquifers onsite and within the buffer area are described as porous, extensive aquifers of low to moderate productivity.

4.3 Previous Investigations

In developing this AMP, ERM undertook a review of the following previous investigations relating to asbestos contamination within the Site:

Detailed Site Investigation: Former RAAF Bringelly Receiving Station (Golder Associates, October 2011, Report No. 107623154 021 R RevA)

- ACM, as asbestos containing cement debris, was identified in the location of the former Married Quarters and in a soil stockpile to the South of the central compound area.
- The DSI reported that free asbestos fibres were not identified in the soil or stockpile samples analysed during the investigation.
- A suspected asbestos cement cable pit was observed on the eastern side of the Compound area.
- The DSI concluded there is a potential for asbestos cement debris to be present elsewhere on the Site.

***Detailed Site Investigation Report 215 Badgerys Creek Road, Bringelly, NSW:* (Western Environmental, 13th December 2019, Report No: P19.114-RPT-DSI_0)**

- The report stated that no surface ACM fragments were identified on the Site and the opportunity for future exposure was considered unlikely, however there was still a risk that ACM fragments may be present within surface and/or subsurface soils that may be revealed during Site works and/or via wind and water erosion.
- Results from 17 sampling locations demonstrated that asbestos concentrations did not exceed the adopted guideline value of 0.01% w/w for ACM or 0.001% w/w for asbestos fines (AF) or fibrous asbestos (FA).
- The report concluded that based on the proposed future land use for industrial/commercial and/or residential purposes, the risks associated with the presence of asbestos may be qualitatively considered to be very low and do not pose an unacceptable risk to future Site users.

ERM Detailed Site Investigation, Bradfield City Centre, 11th October 2022, Rev 04, Ref No 0571466

Results of the DSI indicated the following:

- Fill materials were generally found to be shallow, extending to depths of approximately 0.1 – 0.2 m below ground level (bgl) with the exception of TP92 (in which fill extended to 0.4 m bgl) and comprised a mixture of orange, red and grey mottled clays and tan fine—coarse grained sand.
- During investigation works, no evidence of staining or odours were noted within fill materials. Observations of anthropogenic inclusions such as bitumen, glass, metal wiring, ceramic or brick in fill materials were limited to a few isolated locations near the northern side of the bitumen access road leading to the former Site compound and one isolated location in the gully towards the south of the Site.
- Natural materials were generally encountered at surface or at depths ranging between 0.1 and 0.4 m bgl in locations with identified overlying fill. Natural materials were generally comprised of brown and red clays with occasional grey / orange inclusions, varying in stiffness and plasticity to a depth of approximately 2.5 m bgl overlying fine-grained interbedded shale and sandstone bedrock with clay bands to the maximum depth of investigation works.
- Results of field observations and laboratory analysis from soil samples collected as part of the DSI did not identify ACM within the Site, however as ACM has previously been reported within the portion of the Site identified as the “former married quarters area” ERM recommended that prior to the commencement of construction works an AMP should be developed and implemented during all onsite works to manage potential unexpected finds of ACM.

4.4 Potential for Unexpected Finds at the Site

The following table summarises the potential for unexpected finds of contamination within the Site requiring management under this AMP:

Table 3: Potential Residual Contamination

Potential Contaminated Media	Location	Contaminants of Concern	Comment
Asbestos contaminated soil beneath and potentially at surface	■ Location of Site detailed within Figure 1 ■ Location of the "Married Quarters" illustrated in Figure 2	Asbestos.	■ Asbestos Containing Material (ACM) was previously identified during investigations undertaken by Golder Associates in 2011 within a portion of the Site identified as the "former married quarters" (Appendix A – Figure 2). ERM notes that field observations and laboratory analysis undertaken during two more recent investigations undertaken by Western Environmental in 2019 and ERM in 2022 did not identify evidence of asbestos impacts within the Site including within the former married quarters. ■ Given the extensive sampling undertaken throughout the Site as part of previous investigations, it is expected any finds of ACM would be limited to isolated pockets of ACM within surface fill soils or ACM within service pits and conduits on the Site.

4.5 Preferred Asbestos Management Approach

The table below summarises the preferred management approach for any unexpected finds of ACM within the Site.

Table 4: Preferred Asbestos Management Approach

Media	CoPC	Preferred Remedial Approach
Soil	Asbestos	■ Due to the isolated nature of potential ACM contamination it is considered that the most practical and cost effective approach for the management of ACM impacted fill will be achieved via targeted / **selective excavation and offsite disposal**. ■ While significant volume of ACM impacted soils are considered unlikely, where large volumes of ACM impacted fill are identified during construction works that would result in significant costs for offsite disposal the potential for **onsite containment of impacted soils** may be considered. It is noted that at the time of this AMP, the final Site layout / design levels had not been finalised and as such the location, design etc. for a potential containment cell would be developed at a later time. It is further noted that where onsite containment is required, the specific location, suitability of materials and containment cell design would require review and approval by a NSW EPA accredited Site Auditor.

5. ASBESTOS IDENTIFICATION AND REMOVAL PROCEDURES

5.1 Suspected ACM Identification Procedure

While asbestos has reportedly been previously identified within the portion of the Site identified as the "former married quarters" (Appendix A – Figure 2), during soil investigation works undertaken as part of the Western Environmental (2019) DSI and ERM (2022) DSI , no evidence of ACM or other indicators of significant / widespread anthropogenic wastes were identified.

- As a result, any discoveries of suspected ACM would be considered an unexpected find.

Given the extensive sampling distribution across the Site it is expected that any finds of ACM would be limited to isolated pockets of ACM within surface fill soils within the former married quarters area, or ACM within service pits and conduits on the Site. The procedures to be followed in the event of an unexpected find are documents below.

During Site works, features that may indicate the potential for ACM to be present are:

- Fill soils containing anthropogenic artefacts such as rubble, plastics, metal etc.;
- Material with visible fibres; and
- Any material that has evidently been dumped at the Site.

Additionally, given the potential for ACM to be within the service infrastructure all service infrastructure should be visually inspected upon being uncovered, but prior to any disturbance, to determine if it is potentially asbestos containing.

5.1.1 Initial Find Procedure

- Cease disturbance of the affected portion of the Site and evacuate the immediate area;
- Contact the Principal Contractor and the other relevant subcontractors;
- Principal Contractor and any relevant subcontractors to conduct an assessment of the location and extent of the unexpected find:
  - High risk areas should be isolated and secured against unintended access;
- Where potential contamination has been encountered temporary encapsulation (sealing) of the high risk area to ensure no airborne spread of contamination occurs may be appropriate:
  - This may involve clean soil, plastic sheeting, etc;
- Dust should be prevented by wetting the soil and drainage controls should be arranged where there is a potential for runoff to occur (runoff should be minimised);
- Appropriate warning signs should be placed in the vicinity;
- If the Principal Contractor or relevant subcontractor considers that the material warrants further investigation, the area is to be barricaded to provide an exclusion zone;
- If necessary, environmental controls should be established to minimise the potential for migration of contaminants from the impacted area;
- Where material is to be excavated and stockpiled efforts are required to minimise the mixing of visually different materials types to avoid cross contamination:
  - Where possible stockpiles are to be placed onto 200µm thick plastic or impervious hardstand;
- Principal Contractor (or designated representative) to complete Unexpected Finds Protocol (UFP) form (refer to **Appendix B**) and issue to all relevant stakeholders;

- Further visual assessment, sample collection and analysis undertaken by a qualified environmental consultant. If necessary, samples will be sent to a NATA registered laboratory:
  - Soil sampling where it occurs will be in accordance with National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC, 2013);
  - Material will be sampled at a rate of 1 sample/25 m^3 of impacted material;
- Evaluation of analytical data with respect to specific health screening levels to be undertaken:
  - Following receipt of analytical data the UFP Form/Register is to be amended with final classification of soils, including whether the soils are suitable for the proposed land use or need to be remediated or disposed of offsite to a suitably licensed facility;
- If soils are suitable to remain on-site and/or the area is found to be clean, a work instruction will be provided by the environmental consultant to this effect;
- If materials are unsuitable to remain on Site a waste classification report will be prepared prior to any offsite disposal;
- If the material is subsequently found to contain asbestos, it is required to be disposed of in accordance with the NSW WHS Regulations and NSW EPA Waste Classification Guidelines. This includes waste tracking requirements; and
- If required asbestos air monitoring should also be undertaken by a suitably qualified environmental consultant/occupational hygienist during the disposal of asbestos contaminated materials.

Notes:

- Any licenced asbestos removal works must be notified to SafeWork NSW a minimum of 5 calendar days prior to works commencing;
- Any suspected asbestos containing should be left in place and not disturbed. The Principal Contractor and relevant subcontractors will organise appropriate environmental professionals for further investigation purposes;
- It is essential that material of differing compositions not be mixed;
- Where possible excavated materials should be stockpiled on 200µm thick plastic or impervious hard stand (ie concrete or asphalt) to limit the potential for cross-contamination:
  - Where stockpiled material cannot be placed on an impervious material, stockpile footprint sampling will be required as part of the validation process. Stockpile footprints will be sampled at a rate of 1 sample/100m^2 and subject to analysis for relevant contaminants of concern;
- All sampling for validation, waste classification or characterisation purposes will be carried out in accordance with the following documents:
  - *Contaminated Sites: Sampling Design Part 1 Application* (NSW EPA, 2022);
  - *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013* (No.1) (NEPC, 2013);
  - *Waste Classification Guidelines* (NSW EPA, 2014);
- Any unexpected finds encountered should be listed on a UFP register, which should include the action taken and the status of the unexpected find. A suitable register is included in **Appendix B**:
  - The principal contractor (or their designated representative) is responsible for the maintenance and updating of the UFP Register;

- Once an unexpected find has been identified and a UFP form filled in the Principal Contractor and relevant subcontractors should liaise with the client as to the appropriate means of managing the situation. This should include discussions around the handling, treatment and disposal of material, WHS considerations and how the affected area will be validated and reopened for works;
- Prior to closing out an unexpected find it will be important to ensure the appropriate documentation is obtained, such as: photographs, the UFP form, waste classification letter(s) and a validation report or letter; and
- Identified unexpected finds generated from site works in the process of being assessed onsite are to be tracked as part of the Site Material Tracking Register. This register is to be updated during any activities onsite such as moving the find from the original source location, material assessment works to date, and tracking materials for ultimate reuse or offsite disposal.

5.2 Asbestos Removal Procedures

The following asbestos removal procedures are to be implemented for isolated finds of asbestos contamination within surface soils, or for the removal of redundant asbestos containing service infrastructure. Off Site disposal of the ACM will be the nominated removal strategy.

- **The most likely remediation option for any unexpected finds of ACM identified during the development of the Site will be excavation and offsite disposal, as it is envisioned that any unexpected finds will be small in volume.**
- **While significant volume of ACM impacted soils are considered unlikely, where large volumes of ACM impacted fill are identified during construction works that would result in significant costs for offsite disposal the potential for onsite containment of impacted soils may be considered.**
- **It is noted that at the time of this AMP, the final Site layout / design levels had not be finalised and as such the location, design etc. for a potential containment cell would be developed at a later time. It is further noted that where onsite containment is required, the specific location, suitably of materials and containment cell design would require review approval by a NSW EPA accreted site auditor.**

In accordance with the Work Health and Safety Regulation 2017 (NSW), only Class A asbestos removal licence holders are permitted to conduct asbestos removal work or asbestos-related work that involves friable asbestos. Should friable asbestos be encountered a Class A Licensed Removal Contractor will be required to undertaken any proposed removal works. Non-friable removal works can be undertaken by a Class A or Class B Licensed Removalist.

Prior to the commencement of remediation works, the nominated asbestos removal contractor will notify SafeWork NSW of the intention to complete the removal of greater than 10m^2 of bonded ACM or the removal of friable asbestos as applicable. The works boundary will be defined as the extent of the Site so as to avoid any requirements of re-notification throughout Site works.

In addition to notifying Safe Work NSW, all site workers will be made aware of the location/nature of identified asbestos. This notification can be done daily during a toolbox talk.

Personal protection equipment (PPE) to be worn at all times during asbestos remediation works must include:

- Disposable overalls;
- Respiratory protection (P2 Minimum);
- Safety boots;
- Hard hat and other Site/task specific PPE; and
- Enclosed cabin (the above PPE is not required within an enclosed cabin).

5.2.1 Isolated ACM within Surface Soils

Where ACM fragments are identified in surface soils and not in underlying fill, the fragments will be hand-picked by a Class B licensed asbestos contractor and placed in appropriately labelled bags. Bags will be packaged in accordance with *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019).

Following the completion of hand-picking, the residual soils will be systematically inspected by a suitably qualified environmental consultant for the presence of visible ACM fragments in a back and forth fashion in systematic transects. Where suspected ACM is visually identified by the consultant, additional hand-picking will be carried out.

Following the completion of a successful visual clearance by the consultant where no ACM fragments are identified on residual soils, validation soil sampling will be carried out in accordance with **Section 5.4**of this document.

5.2.2 ACM within Sub-surface Soils

Where ACM fragments are identified within both surface and subsurface soils, the removal procedure will be as follows:

1. Nominate and set out the impacted area for excavation;
2. Prior to the commencement of excavations in any given area, establish a 10 metre Exclusion Zone with the installation of safety warning signs and barricade measures around the boundary of the excavations;
    a. No personnel are to enter the exclusion zone without adequate PPE and training;
3. Excavate the material impacted by ACM to the depth of natural soil;
    a. Excavator operator(s) and truck driver(s) within enclosed cabs are to remain inside their vehicles during the loading operation. The air-conditioning is to be on ‘recirculate’ or switched off. If the cab is not enclosed, full PPE is to be worn;
    b. During the excavation operation the materials are too be wetted thoroughly;
    c. Material inadvertently spilt on the ledges of the truck or truck sides are to be washed off prior to the truck leaving the area; and,
    d. On completion of the work the operators should move to the designated decontamination area;
4. Excavated ACM contaminated material to be disposed of at a suitably licensed landfill following waste classification;
    a. Classification may occur in-situ prior to excavation or ex-situ from stockpiles dependent on Site conditions;
5. The excavation will require asbestos clearance/validation following load out; and,
6. Following receipt of an Asbestos Clearance Certificate the area can now be accessed by the general personal to proceed with the Site works.

5.2.3 Asbestos Containing Service Infrastructure

Where redundant asbestos containing infrastructure (i.e. pipework or pits) is identified removal works will be carried out in accordance with *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019) and the following methodology:

1. Soil overlying the infrastructure will be excavated by, or under the supervision of licensed asbestos contractors and stockpiled to one side of the service line. The infrastructure will not be exposed during this process, with only preliminary excavation undertaken to expose the infrastructure in order to check the depth and ensure an appropriate buffer was maintained to prevent disturbance. This soil is to be stockpiled for onsite reuse, as no contact with asbestos has occurred at this point.
2. On a subsequent pass, the infrastructure will be fully exposed and gently removed by the contractors. The infrastructure will be disposed off-site as asbestos waste.
3. Soils removed during Step 2 should be stockpiled alongside the excavation area, on the opposite side of the excavation to the overlying spoil. These soils previously in direct contact with infrastructure (i.e. material within approximately 100 mm) will undergo sampling and analysis for either beneficial reuse onsite or disposed off-site as asbestos waste.

NOTE: If laboratory results indicate the material requires disposal, chemical sampling will be conducted to adequately characterise the soils in accordance with the *Waste Classification Guidelines* (NSW EPA, 2014).

4. Following removal of the asbestos containing infrastructure and potential asbestos impacted soil, asbestos validation sampling of the excavation faces, stockpiled soil and stockpile footprints is to be carried out in accordance with **Sections 5.4** of this document.
5. If results indicate no asbestos is detected, no further material will be removed from the area. Where asbestos is detected in validation samples, further remediation and validation sampling will be conducted.

5.3 Decontamination

5.3.1 Personal Decontamination

Issue Appropriate hygiene and decontamination assists with minimising worker exposure and the transportation of potentially contaminated materials from work areas to more sensitive environments.

Criteria No contaminated clothing or PPE to leave the work areas.

Controls

1. Eating, drinking, chewing gum and smoking will be prohibited at all times whilst working in potentially hazardous areas.
2. All individuals undertaken asbestos disturbing works at the Site will pass through a decontamination unit or decontamination prior to exiting work areas in accordance with *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019). All outer work material will be physically removed from personnel prior to exiting work areas.
3. Remain in full PPE in work areas at all times.
4. Plant operators are to remain inside vehicle during operation with windows and doors closed and air-conditioning on recycle only or switched off.

5.3.2 Vehicle Decontamination

Issue Appropriate vehicle and equipment decontamination assists with minimising worker exposure and the transportation of potentially contaminated materials from work areas to more sensitive environments.

Criteria No contaminated vehicle or equipment to leave the work areas.

Controls

1. Trucks and equipment required for asbestos removal/remediation works will remain within the works area until the completion of works. Vehicles will not traffic between work areas and other areas of the Site, including lunch areas, car parks, etc.
2. Truck cleaning areas will be used to wash down all vehicles potentially coming into contact with contaminated soil leaving all remediation or works areas. The surface of internal access roads carrying vehicular traffic will be kept clean.
3. Vehicles carrying fill materials sourced from the Site will at all times be covered with an “enviro-tarp” or similar impervious material to prevent the escape of dust or other material.
4. A log of all trucks removing fill material from the Site or importing soil to the Site will be kept in a Truck Log book.

5.4 Asbestos Clearance / Validation Procedures

All asbestos removal locations will be subject to asbestos clearance and validation at the completion of removal works and generally will comprise of visual inspection and validation sampling of:

- Surface soils following hand-picking of ACM fragments;
- Walls and base of excavations created on-site to facilitate removal of asbestos contaminated soils or asbestos containing infrastructure; and,
- Stockpile footprints following on-site relocation or off-site disposal. However, where stockpiles are placed onto 200µm plastic, footprint sampling will not be required.

All clearance inspections outlined hereafter, should be conducted in accordance with Section 3.10 *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2018). In accordance with Clause 473 and 474 of the WHS Regulations (2017) at the completion of any asbestos removal works (should they occur) a written asbestos clearance certificate is required before the removal area can be re-occupied and works resumed. As asbestos removal works on the Site are most likely going to be occurring in distinct pockets each removal area will require a separate clearance certificate to allow for reoccupation. At the completion of works a Validation Report will be prepared in accordance with *Consultants reporting on contaminated land: Contaminated Land Guidelines* (NSW EPA, 2020) and include all clearance certificates issued for the Site.

The following sections outline the sampling and analysis plan for conducting asbestos clearance and validation works depending on the type of asbestos contamination.

5.4.1 Asbestos Clearance/Validation Criteria

The adopted Health Screening Level have been sourced from the NSW EPA endorsed *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC, 2013) and are provided in **Table 5** below.

Table 5: Asbestos Clearance/Validation Criteria

Form of Asbestos	Health Screening Level (w/w)
Bonded ACM	0.01%
Fibrous Asbestos	0.001%
Asbestos Fines	0.001%
Surface Asbestos (0-0.1 m BGL)	No visible asbestos

5.4.2 Surface ACM Validation

Following hand-picking of ACM fragments from the surface or the removal/relocation of an ACM impacted stockpile a clearance inspection will be carried out of surface soils and samples collected to confirm no residual asbestos contamination.

The clearance inspection will be performed by a competent environmental consultant or hygienist walking systematic transects of the impacted area with clearance/validation samples collected at a rate of one sample per 50 m^2 (or part thereof).

In the case that the clearance inspection identifies ACM fragments or results indicate concentrations that exceed the adopted HSLs, the surface of the area will be hand-picked or scraped by the remediation contractor and another round of inspection and validation sampling will be carried out. This will continue until the remedial objectives are achieved.

5.4.3 Asbestos Excavation Validation

Following the excavation of asbestos impacted soils a clearance inspection will be conducted and validation samples collected. As a minimum, sampling numbers and analysis will conform to the plan presented in **Table 6**.

Table 6: Asbestos Excavation Validation Plan

Location	Sampling Density
Excavation Base	One sample per 50 m^2 or part thereof.
Excavation Walls (North, East, South, West)	A minimum of one sample from each wall, where the depth of excavation is greater than 0.5 m bgl; At least 1 sample from each wall per 5 m length of strata of interest; Where a wall is greater than 1 m high, there is a change of strata, or visual evidence of contamination, an additional sample will be collected at the rate of 1 sample per 1 m depth interval and additional discretionary samples where there is visual or olfactory evidence of contamination

In the case that the clearance inspection identifies ACM fragments, or laboratory analysis reports elevated contaminant concentrations, additional excavation will occur at the inspection/sampling location, followed by another round of inspection and validation sampling to be carried out. This will continue until the remedial objective is achieved.

5.4.4 Validation of Asbestos Pipe Removal

Following the removal of asbestos pipe, a clearance inspection will be conducted and asbestos validation samples collected. As a minimum, sampling numbers and analysis will conform to the validation plan presented in Table **7**.

Table 7: Asbestos Pipe Removal Validation Plan

Location	Sampling Density
Trench Base	One sample per 20 Lineal metres
Trench Walls	One wall sample per 20 lineal metres, at the depth of pipe removal, where the depth of excavation is greater than 0.5 m bgl; (Where a wall is greater than 1 m high, a greater number of samples may be collected in a vertical plane at discretionary sampling locations)

Each asbestos sample will be collected as a bulk sample and constitute five grab samples from the 20 m interval of wall or base, to ensure adequate coverage and representation of the validation area. Based on a typical 1m wide by 1 m deep excavation, one sample per 20 m length interval (wall or base), is equivalent to 1 sample per 20 m^2 area.

6. ASBESTOS REMEDIATION / REMOVAL AND CLEARANCE REQUIREMENTS

Outlined below are the minimum asbestos clearance certification procedures and methodology to be utilised following the completion of removal of asbestos-contaminated material. The procedures were formulated from methods outlined in Section 3.10 “Clearance Inspection” and Section 3.11 “Air Monitoring” in the *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019).

6.1 Visual Asbestos Clearance Inspection

Following the movement of ACM impacted materials; a visual inspection must be conducted of the residual materials. The remediation area is to be systematically visually inspected in a back and forth fashion across the area by an appropriate independent competent person or licensed asbestos assessor (LAA) in systematic transects.

The area is to be inspected thoroughly for the presence of visual ACM. Upon completion of the remediation process and satisfactory visual inspection results, asbestos clearance soil sampling can be conducted within the remediation area as appropriate.

6.2 Asbestos Air Monitoring Program

With regards to the Site, Project Management in association with the designated environmental consultant will establish monitoring programs as appropriate, to ensure that all activities undertaken in relation to asbestos comply with relevant exposure limits, standards and guidelines. Where disturbance of identified Bonded ACM is a potential, a monitoring program can be implemented. Should friable asbestos be identified an air monitoring program is required.

Monitoring requirements include:

- Daily Airborne Asbestos Monitoring during all works undertaken within areas identified with unexpected finds of asbestos; and
- Final clearance monitoring within the remediation area following the removal of all visible asbestos contamination.

Should an air monitoring program be required the number of monitors used will be dependent on the proposed works with a minimum of two sample pumps to be used. The location of monitors will be based upon the most susceptible areas to airborne asbestos contamination and transportation or areas of higher risk, e.g. downwind of works, enclosure entry/exit etc.

Monitoring results will be reported to the Project Manager as soon as possible after the conclusion of the monitoring interval. Results are required to be readily available and accessible to both management and employees and displayed in a prominent position. Every week, the Project Manager will provide a summary of current monitoring results detailing dates of sampling, fibre concentration levels and the date of notification of results to the Project Manager. These results will be communicated to all site personnel.

The risk associated with asbestos relates to the inhalation of airborne asbestos fibres. These fibres may be liberated by disturbance of the asbestos-containing material or dusts. Air sampling is used to determine exposure to airborne asbestos fibres, using a modified version of the Membrane Filter Method (NOHSC, 2005). Once asbestos exposure levels are determined, a level of action is to be taken in response to the recorded levels. These actions are listed below in **Table 8**.

Table 8: Recommended Action Levels for Asbestos Exposures

Measured Fibre Concentration (% of Exposure Standard)	Recommended Action
<0.01 fibres/mL	No action necessary; maintain a low-level baseline air sampling program and Continue with Control Measures
> 0.01 fibres/mL	1) Review Control Measures. 2) Ensure all PPE requirements and Decontamination practices are being complied with in the area. 3) Increase monitoring frequency, focusing on personal exposure monitoring and worker category assessment. Ensure personal exposures are maintained as low as practicable. Investigate workplace/work practices and control measures. Invoke agreed work and management procedures. Implement routine personal monitoring and auditing procedures.
Result > 0.02 fibres/mL	1) Stop work in the affected area and investigate the cause of elevated results. 2) Designate area and take remedial action. Implement formal asbestos management procedures including cease work until such time as asbestos concentrations are acceptable.

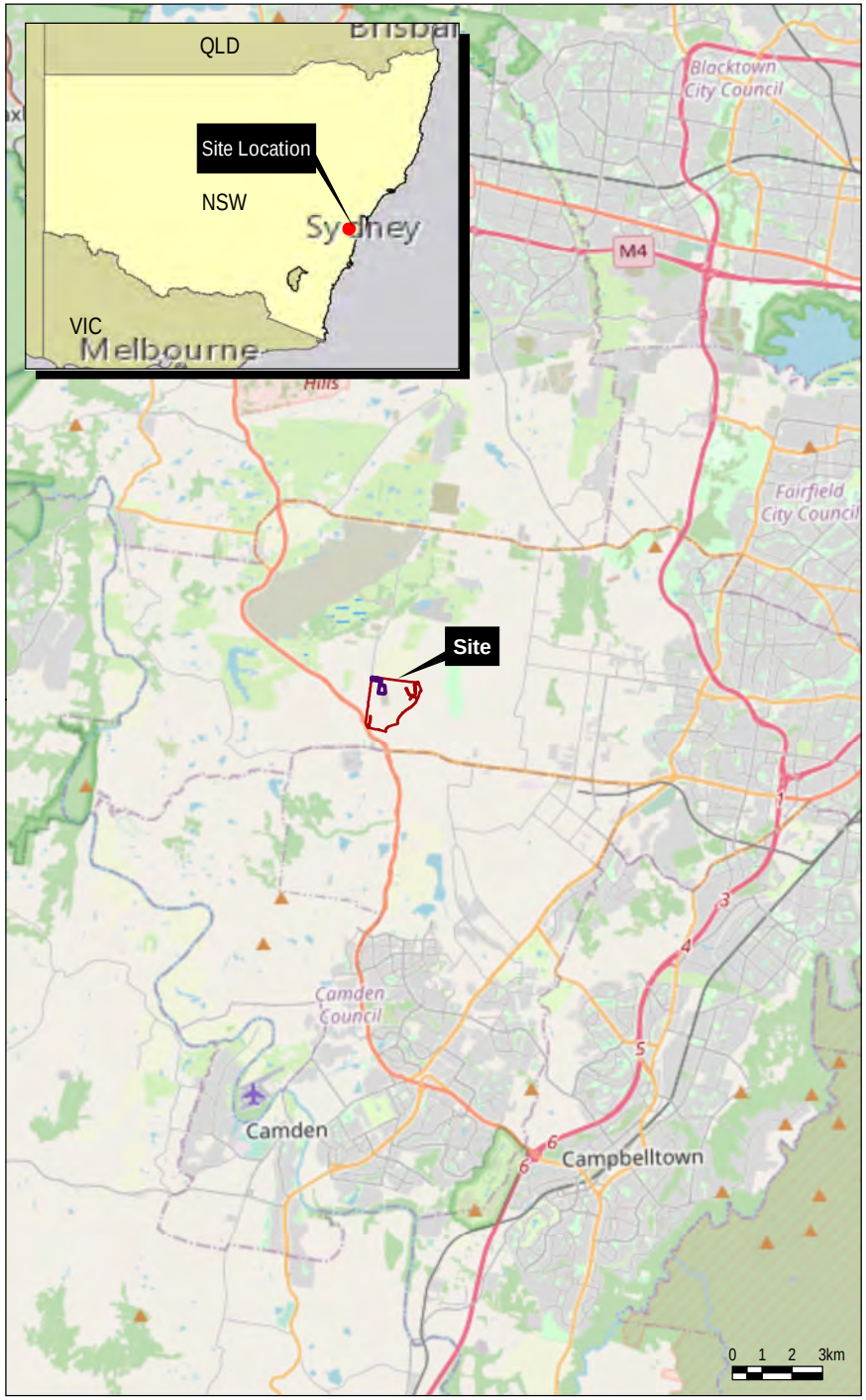
It is important that the interpretation of these results is undertaken by an experienced person conversant with the Membrane Filter Method and its limitations. All results of air sampling must be recorded and filed. The results will be reported and made available to all employees.

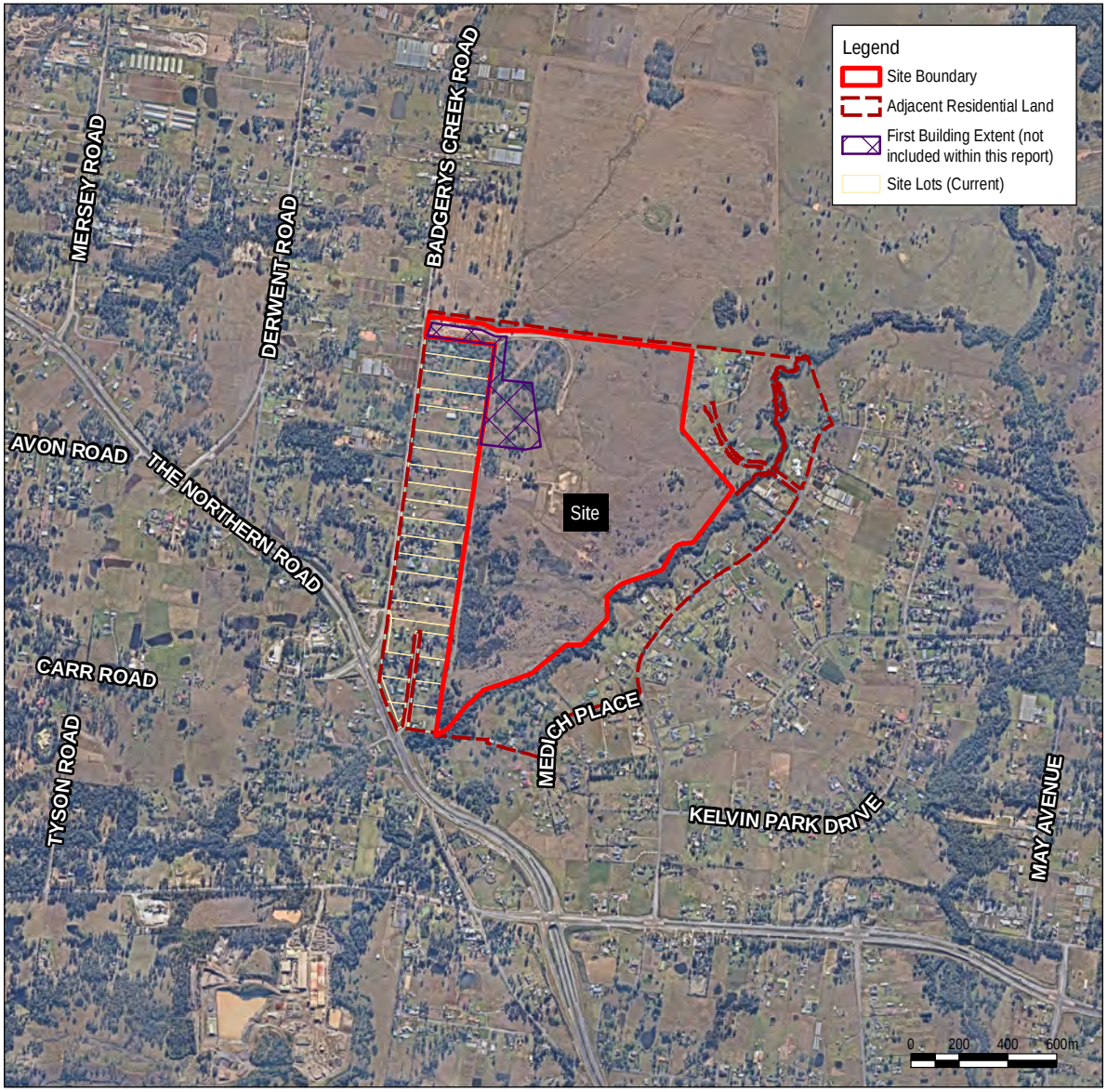
Auditing procedures should be used as the primary technique to ensure that agreed work and management procedures and control measures are operating effectively. Airborne Asbestos Monitoring will be carried out using the only internationally recognised sampling and analytical methodology - *the Membrane Filter Method for Estimating Airborne Asbestos Dust (NOHSC:3003 (2005))*.

7. REPORTING AND AMP AUDITING REQUIREMENTS

Report	Requirement
Material Classification Reports	■ All reports relating to unexpected finds, offsite disposal of fill materials and importation of any materials used for construction / backfilling purposes are to be provided to the land custodian upon completion of works. ■ Reports are to include details on the methodology, sampling rationale, laboratory analysis and subsequent classification information and materials tracking information detailing the total volume and final placement / disposal location. ■ ERM notes that all waste classification works are to be undertaken in accordance with relevant NSW EPA requirements at the time of works.
Non-Conformance Reporting	■ Non-conformances will be recorded in a Non-Conformance and Corrective Action Report. Details of the non-conformance, including any immediate corrective actions undertaken, are to be recorded by the land custodian. ■ It is the responsibility of the site foreman to immediately inform the land custodian of any non-conformances and initiate corrective actions, if required. Once completed, the site foreman will provide details of the actions undertaken on the Non-Conformance Report and sign, date and file the report.
Incident Reporting	■ Records will be kept of any environmental incidents, accidents, hazardous situations, unusual events and unsafe health exposures and the corrective action taken. ■ The contractor / site superintendent will adequately investigate the cause of any incident so that necessary changes in work practices can be made to prevent the incident recurring.
Complaints Reporting	■ The contractor will maintain a register of complaints, which will include a record of any action taken with respect to the complaints. ■ If a complaint identifies a non-conformance, a Non-Conformance and Corrective Action Report must be initiated. ■ A copy of all complaint reports and subsequent investigations are to be provided to the land custodian or their nominated representative for filing and included within compliance reporting (detailed below).
AMP Auditing	■ Upon completion of any works involving the management of ACM within the Site, the contractor or its nominated representative will review all environmental documents, records and monitoring results to ensure compliance with the requirements of the AMP and current statutory requirements. ■ Results of audit findings are to be provided to the land custodian in accordance with any reporting criteria specified within relevant works approvals.
AMP Review / Update	■ The AMP should be reviewed, and updated as necessary after 2 years or where audit findings indicate the need for updating / refining of management controls. ■ Results of review findings and potential recommendations for required updates are to be provided to the land custodian. ■ ERM notes that where the AMP requires updating, all changes / amendments must be undertaken by a suitably qualified environmental specialist (or professional) and approved / endorsed by an ACT EPA approved Site Auditor and the ACT EPA prior to implementation.
Site Validation Reporting	Upon completion of any works requiring the management / offsite disposal of ACM impacted fill within the Site, the contractor is to provide the land custodian or their nominated representative an Site Validation Report written in accordance with NSW EPA guidelines for reporting on contaminated sites (at the time of works) ■ **ERM notes that the Site Validation Report will require review / endorsement by a NSW EPA accredited site auditor.** The report is to be provided to land custodian or their nominated representative within **21 days** of completion of works. The land custodian should keep these reports for records.
Record Keeping	All records related to implementation and ongoing auditing of the AMP should be maintained by the land custodian or their nominated representative in a consolidated and easily accessible location.

APPENDIX A FIGURES





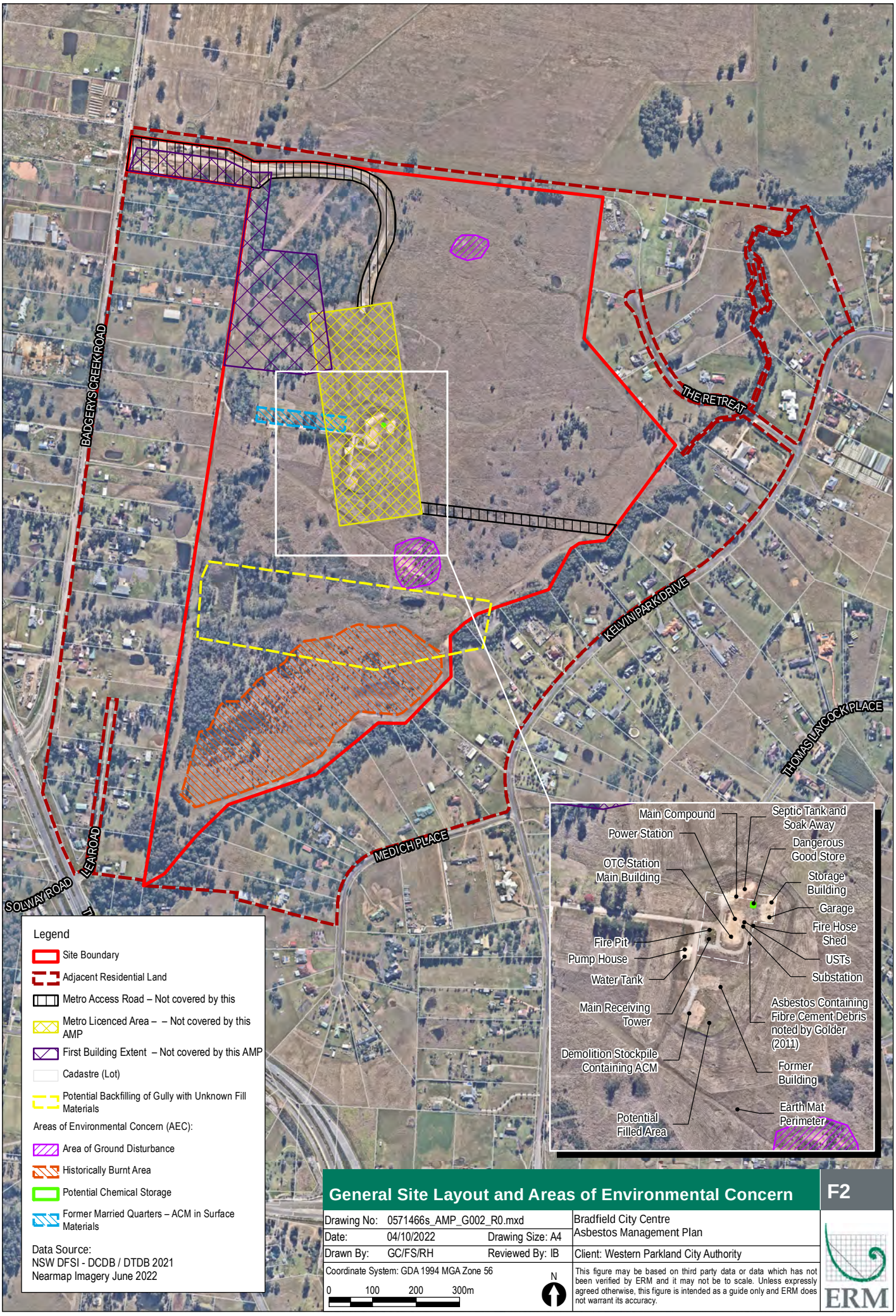
Data Source:
NSW DFSI - DCDB / DTDB 2021
Nearmap Imagery June 2022
Esri OpenStreetMap 2022

Site Location

F1

Drawing No:	0571466s_AMP_G001_R0.mxd		Bradfield City Centre Asbestos Management Plan
Date:	04/10/2022	Drawing Size: A4	
Drawn By:	GC / RH	Reviewed By: IB	Client: Western Parkland City Authority
Coordinate System: GDA 1994 MGA Zone 56		N	This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM



General Site Layout and Areas of Environmental Concern

F2

Drawing No: 0571466s_AMP_G002_R0.mxd		Bradfield City Centre Asbestos Management Plan
Date: 04/10/2022	Drawing Size: A4	
Drawn By: GC/FS/RH	Reviewed By: IB	Client: Western Parkland City Authority

Coordinate System: GDA 1994 MGA Zone 56

0 100 200 300m

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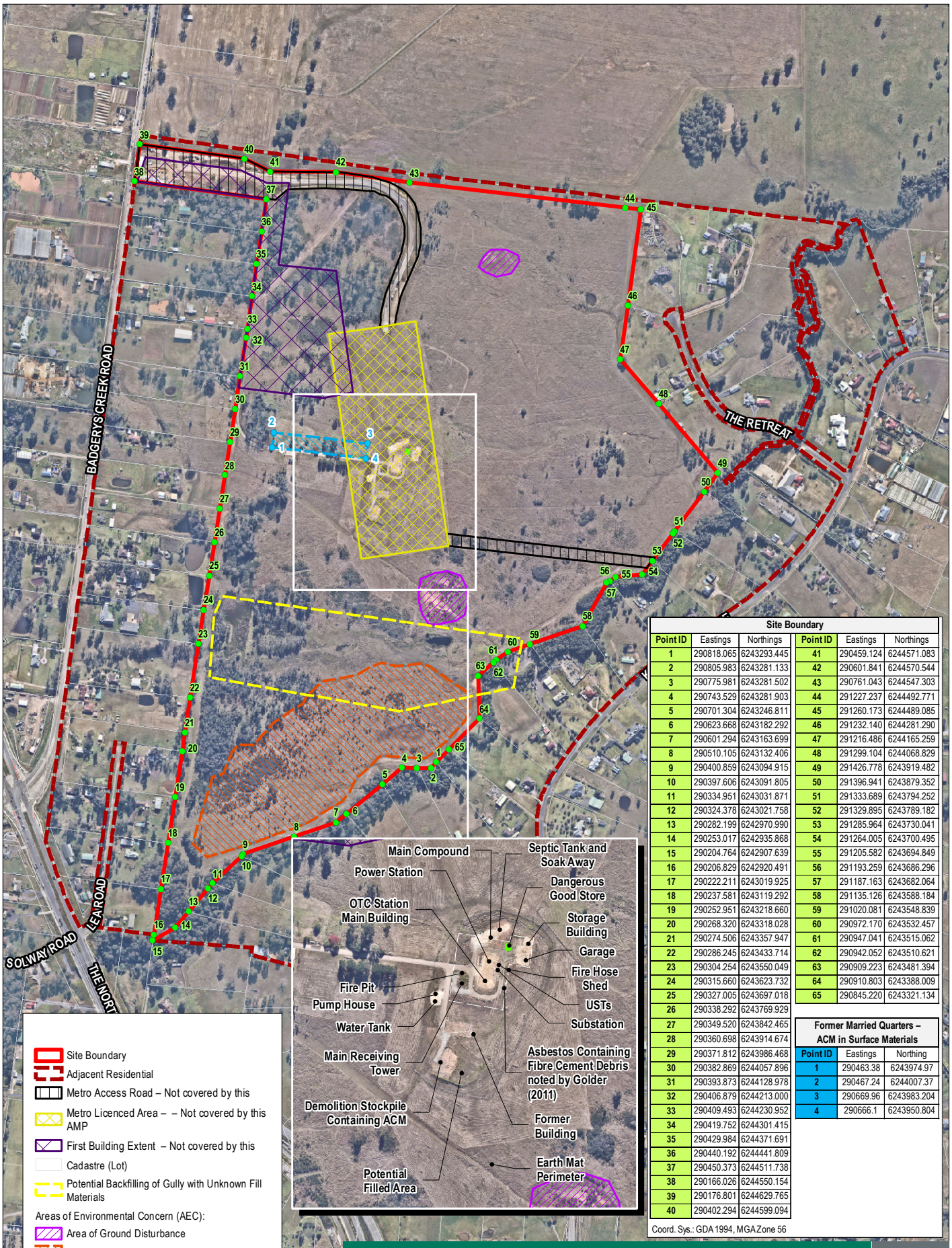
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM



Site Boundary

Point ID	Eastings	Northings	Point ID	Eastings	Northings
1	290818.065	6243293.445	41	290459.124	6244571.083
2	290805.983	6243281.133	42	290601.841	6244570.544
3	290775.981	6243281.502	43	290761.043	6244547.303
4	290743.529	6243281.903	44	291227.237	6244492.771
5	290701.304	6243246.811	45	291260.173	6244489.085
6	290623.668	6243182.292	46	291232.140	6244281.290
7	290601.294	6243163.699	47	291216.486	6244165.259
8	290510.105	6243132.406	48	291299.104	6244068.829
9	290400.859	6243094.915	49	291426.778	6243919.482
10	290397.606	6243091.805	50	291396.941	6243879.352
11	290334.951	6243031.871	51	291333.689	6243794.252
12	290324.378	6243021.758	52	291329.895	6243789.182
13	290282.199	6242970.990	53	291285.964	6243730.041
14	290253.017	6242935.868	54	291264.005	6243700.495
15	290204.764	6242907.639	55	291205.582	6243694.849
16	290206.829	6242920.491	56	291193.259	6243686.296
17	290222.211	6243019.925	57	291187.163	6243682.064
18	290237.581	6243119.292	58	291135.126	6243588.184
19	290252.951	6243218.660	59	291020.081	6243548.839
20	290268.320	6243318.028	60	290972.170	6243532.457
21	290274.506	6243357.947	61	290947.041	6243515.062
22	290286.245	6243433.714	62	290942.052	6243510.621
23	290304.254	6243550.049	63	290909.223	6243481.394
24	290315.660	6243623.732	64	290910.803	6243388.009
25	290327.005	6243697.018	65	290845.220	6243321.134
26	290338.292	6243769.929			
27	290349.520	6243842.465			
28	290360.698	6243914.674			
29	290371.812	6243986.468			
30	290382.869	6244057.896			
31	290393.873	6244128.978			
32	290406.879	6244213.000			
33	290409.493	6244230.952			
34	290419.752	6244301.415			
35	290429.984	6244371.691			
36	290440.192	6244441.809			
37	290450.373	6244511.738			
38	290166.026	6244550.154			
39	290176.801	6244629.765			
40	290402.294	6244599.094			

Coord. Sys.: GDA 1994, MGA Zone 56

Former Married Quarters – ACM in Surface Materials

Point ID	Eastings	Northing
1	290463.38	6243974.97
2	290467.24	6244007.37
3	290669.96	6243983.204
4	290666.1	6243950.804

General Site Layout and Areas of Environmental Concern

F2

Drawing No: 0571466s_AMP_G002_R0.mxd
Date: 14/10/2022 Drawing Size: A4
Drawn By: CB Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56

0 100 200 300m

N

Bradfield City Centre
Asbestos Management Plan

Client: Western Parkland City Authority

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

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APPENDIX B UNEXPECETED FIND PROTOCOL FORM AND REGISTER

UNEXPECTED FINDS PROTOCOL FORM EXAMPLE

To be completed by the Principal Contractor/Environmental Representative

SITE:

PERSONNEL ON-SITE:

DATE:

DAILY SUMMARY:

1. Suspect material encountered during daily activities: YES ☐ NO ☐

(if YES, compete 2 to 5)

2. Environmental Representative contacted: YES ☐ NO ☐

3. UFP Reference Number

(label occurrences sequentially 1, 2, 3, etc.).

DESCRIPTION OF MATERIAL ENCOUNTERED:

4. Asbestos or suspected ACM present: YES ☐ NO ☐

5. Brief written description of material:

6. Material isolated: YES ☐ NO ☐

7. Location of contaminated material (incl. field sketch/map if required):

8. Photographs taken: YES ☐ NO ☐

NAME: **SIGNATURE:**

Unexpected Finds Register Example

UFP No.	Date Found	Suspect Material	Description	Recorded on UFP Form	Action Taken	Status
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		
				YES ☐ NO ☐		

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APPENDIX J

Department of Housing's Managing Urban Stormwater Soils and Construction - Volume 1, Fourth Edition

NAVIGATING THIS PDF DOCUMENT

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SOILS AND CONSTRUCTION

Volume 1

4th Edition, March 2004

Managing Urban Stormwater

Landcom
First published 1990
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Third edition, August 1998
Fourth edition, March 2004

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FORWARD

Attitudes to stormwater pollution and the environment have changed significantly. Today, both the community and the Government expect a greater commitment to environmental protection.

Sustainable development is an essential tool for protection of our waterways. Housing and infrastructure need to be provided for a growing population while protecting our fragile environment through the conservation and enhancement of natural resources.

To help achieve healthier waterways, the NSW Government is releasing a series of publications aimed at improving urban stormwater management practices. This document forms part of the *Managing Urban Stormwater* series.

Comprehensive guidelines in this publication will help all those involved in the construction industry to comply with appropriate stormwater quality outcomes. These outcomes have been established by various consent authorities, including the Department of Environment and Conservation (DEC) and local government. The document contains special design suggestions, on how to obtain approvals from regulatory bodies.

This publication which has been managed and funded by Landcom updates an earlier edition published by the Department of Housing in 1998. Valuable input was provided by other NSW Government agencies, local government, industry groups and consultants.

I congratulate everyone involved in the production of this publication. It is an excellent example of how the public and private sectors and industry associations can work together to protect the environment for future generations.

The document contains the tools needed to help mitigate land and water degradation. It should be required reading for those involved in the construction industry.

The Hon Carl Scully MP
Minister for Housing
Minister for Roads
Leader of the House

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– Graphs showing Y-percentile, X-day rainfall depths (mm) for 59 sites across New South Wales

– Graphs for interpolation of rainfall depths at locations or for time periods not listed above

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    - Beca Carter Hollings & Ferner Ltd (2003). *Report TP90 Flocculation Guidelines.* Auckland Regional Council, Auckland.
    - Fifield, G.S. (2001). *Designing for Effective Sediment and Erosion Control on Construction Sites.* Forester Press, Santa Barbara, California, USA.
    - Morse, R. (2001). "Application of Soils Data to Urban Erosion and Sediment Control Programs". In Cattle, S.R and George, B.H. (Eds.), *Describing, Analysing and Managing Our Soil.* Proceedings of the DAMOS 1999 workshop held at The University of Sydney, 22-26 November 1999. Published jointly by The University of Sydney and the Australian Society of Soil Science Inc. (NSW Branch)
    - Rosewell, C.J. and Turner, J.B. (1992). Rainfall Erosivity in New South Wales. *CaLM Technical Report No. 20.* Department of Infrastructure Planning and Natural Resources, Sydney
    - The information contained in Tables A3 and D1 was developed from a large number of sources, including various advertising material published by the product manufacturers. It has been sent to the manufacturers for the products listed or their Australian agents for review and comment. Most of these did not respond; however, some gave valuable constructive comments.
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Chapter 1

INTRODUCTION

1. Introduction

1.1 Background

(a) Changes in land uses from rural, open space or bushland settings to other forms have the potential to:

- cause dramatic disturbances to the soil
- destroy vegetation
- alter natural drainage pathways
- affect the environmental and amenity values adversely, not only at the site, but areas downstream of it.

During the land disturbance phase of development, hundreds of tonnes of soil can be eroded from each hectare of land disturbed in a development process and be deposited onto nearby lands or into downstream waterways and estuaries. Of particular concern is the fine, dispersible sediment that can carry other pollutants "piggyback" and do not settle until they reach saline waters. Inadequate planning and design for land disturbance activities can impart major ongoing management costs to future communities for the removal of this sediment, to reduce stormwater pollution to acceptable levels, to reinstate the ecological values of streams and estuaries, and to enhance the values of recreational areas.

(b) Improved environmental management is needed from all sectors of the development industry to control soil erosion and consequent sediment pollution to lands and waterways downslope.

(c) The development and construction industries have the major responsibility for the control of erosion of soils and pollution from sediment, construction waste and the like during land disturbance activities and immediately afterwards. Land developers must fulfil their various responsibilities under the planning and legislative frameworks that have been established to ensure that works are undertaken in an environmentally sensitive manner. All operators should have a practical understanding of the principles of good soil and water management before being allowed on site.

(d) Local councils should ensure that those who disturb lands fulfil their roles relating to stormwater management and the control of stormwater pollution. To this end, they have developed and are implementing Stormwater Management Plans that describe the specific requirements and outcomes to be achieved with development activities. Outcomes and objectives are defined in these plans for specific types and stages of urban development (i.e. construction and post construction).

1.2 Purpose of these Guidelines

(a) If implemented, these guidelines will help mitigate the impacts of land disturbance activities on soils, landforms and receiving waters by focussing on erosion and sediment control. They will help:

- reduce pollution to downstream areas and receiving waters
- reduce land degradation
- raise an awareness of ecologically sustainable development (ESD) principles and their application to development.

(b) The guidelines are an important element of the New South Wales (NSW) Government's urban stormwater program, which aims to improve the health, ecology and amenity of urban streams, rivers, estuaries and beaches through better management of stormwater. They:

(i) are intended for use by all those involved in non rural land disturbance activities where more than 250 square metres of land will be affected, including developers, consultants and council officers;

(ii) are based on the premise that land degradation associated with land disturbance activities can be avoided or minimised, largely through appropriate planning before commencement of earthworks and by applying the best management practices (BMPs) available. Each BMP can be regarded as a "carriage" in a "treatment train" that should be implemented completely to ensure that the desired degree of soil and water management is achieved;

(iii) propose cost-effective BMPs based on the best available technology appropriate to particular land disturbance activities;

(iv) allow the user flexibility to make choices reflecting the BMP most appropriate to the individual site. These minimum goals should:

- control erosion of soil materials
- control sediment and other particulate matter as near to the source as practicable
- achieve stability of soil and water management structures in the design storm event
- achieve outcome-based performance levels relating to the control of sediment pollution and turbidity in a specified storm event; and

(v) do not preclude the use of sound judgment, especially in unusual situations.

Generally, the guidelines do not describe most of the background to their technical content. This can be found in other literature.

(c) The Department of Environment and Conservation (DEC), incorporating the former Environment Protection Authority (EPA), has been given primary responsibility for the implementation of the NSW Government's Urban Stormwater Program. To help councils and industry to improve stormwater management, the Managing Urban Stormwater (MUS) series of guidance documents, including the first edition of MUS: Soils and Construction, was published in 1997-98.

The MUS series of documents are currently being updated and revised, with the following series of documents to be published in 2004:

(i) *Managing Urban Stormwater: Council Handbook* – the revised document will provide an updated framework and process that local councils can use to improve their stormwater planning and decision-making systems. The framework will allow managers to compare the effectiveness and efficiency of different stormwater management strategies, outlined in other MUS documents.

(ii) *Managing Urban Stormwater: Treatment Techniques* – the revised edition will provide more detailed guidance in the selection, assessment, design and construction of a range of non-proprietary stormwater treatment measures, such as gross pollution traps, bioretention and infiltration systems, vegetated swales and constructed wetlands.

(iii) *Managing Urban Stormwater: Urban Design* – this new document will provide guidance to councils and the development industry in the implementation of water sensitive urban design (WSUD) including how to support and implement WSUD through the environmental planning framework, conceptual design of a range of urban development types, at both the subdivision and allotment scale, and brief guidance in relation to water reuse and stream remediation. More detailed guidance on these latter aspects of WSUD will be provided in separate, supplementary documents.

(iv) *Managing Urban Stormwater: Soils and Construction*

- *Volume 1* – this document that focuses on stormwater management, primarily erosion and sediment control during the construction-phase of urban development.
- *Volume 2* – a supplementary document to Volume 1, which will provide guidance to industry, consent authorities and regulators in relation to erosion and sediment control for other (non-urban) development activities. This document will guide users in the application of processes and techniques detailed in Volume 1, to other development activities for which erosion and sediment control is a significant issue, such as mines and quarries, road and highway construction, waste landfill sites, construction and maintenance of unsealed roads and the installation of services.

(v) *Managing Urban Stormwater: Pollution Prevention* – several guidance documents or products will be prepared to help stormwater managers employ pollution prevention strategies, such as education and auditing. These will include:

- Council Operations Toolkit – to help local councils operations staff, supervisors and managers improve the environmental performance of their own council operations from a stormwater perspective;
- Community education planning tool and resources – to help those with community education project management responsibilities;
- Council Industry Assessment Kit – a business assessment mentoring system and case studies of industry assessment and education, to build the capacity of

local government officers to undertake environmental assessment and auditing; and

- Guidance for local councils to identify and address impediments to the implementation of adequate erosion and sediment controls for developments undertaken or approved by local councils.

1.3 Format of this Document

Chapter 1, this introductory chapter, includes:

(i) a description of the general principles of soil and water management and an outline of the principles of ecologically sustainable development (ESD);

(ii) a brief outline on how to plan for soil and water management;

(iii) a statement on the causes of land degradation and its costs; and

(iv) a summary of the current legislation and policy requirements of the NSW Government and its agencies that control and guide urban land developments.

Chapter 2 outlines the preparation of plans for control of soil erosion, pollution of waterways and links site attributes to the required BMPs.

Chapter 3 contains guidelines on identifying and addressing constraints and opportunities to soil and water management.

Chapter 4 describes soil and water management aspects of clearing of lands, stripping and stockpiling of soil materials, and management and reuse of topsoil for use in site rehabilitation.

Chapter 5 provides practical erosion control information covering both sheet and concentrated water flow conditions and subsoil drainage.

Chapter 6 contains applied information relating to the control of waste and sediment pollution from both water and wind.

Chapter 7 discusses soil conservation aspects of vegetative stabilisation of recently disturbed lands.

Chapter 8 outlines maintenance measures to be employed on all land disturbance sites.

Chapter 9 addresses the application of the information contained in Chapters 4 to 8 in urban development areas.

Chapter 10 is a bibliography for Volume 1.

Appendixes are included with Volume 1 that contain significant additional background data to the design of soil and water management works.

1.4 The Problem

1.4.1 Causes of Urban Land Degradation

(a) Most land degradation associated with land disturbance activities in the Central and Eastern Divisions of NSW results from erosion by water, salinity and acid sulfate soils. Wind is the main agent of degradation in the Western Division and on sandy soils on the coast. Degradation can result in sediment pollution to lands and waterways elsewhere. In particular, rates of erosion are likely to be high wherever the vegetative cover has been disturbed and/or water artificially concentrated. For example, the erosion hazards can increase by more than one hundred fold simply by removing the protective vegetative cover. Other pollutants are often associated with the sediment, including nutrients, pesticides and other contaminants.

(b) Rates of erosion are likely to be particularly high wherever the vegetative cover has been disturbed and/or water artificially concentrated. The problem has increased markedly in the last 10 years as more "marginal" lands have been developed for urban purposes.

(c) Salinity is emerging as a significant problem in some urban areas causing damage to building foundations, service facilities and road pavements. Salinity results from the accumulation of soluble salts on the soil surface. Commonly these salts are chlorides, sulfates, or carbonates of sodium, calcium and magnesium. Rising water tables will bring these salts to the surface where they will cause vegetation to die and result in severe damage to property and the environment.

(d) Acid sulfate soils are a major environmental problem affecting areas of land in the coastal region of NSW. They form when soils naturally containing iron sulfides are dug up or exposed to air, forming sulphuric acid. Large-scale drainage of coastal floodplains for flood mitigation, urban expansion and agriculture has exposed large areas of acid sulfate soils.

1.4.2 Cost of Degradation

(a) While the direct costs of erosion damage are easily measured and have been well documented, the indirect costs, including those of an environmental nature are often more important, but rarely recognised and analysed. Environmental damage, for example, often accumulates slowly and produces dramatic effects only after many years. Indirect costs commonly arise from such factors as:

(i) degradation of urban bushland, riparian, aquatic and marine habitats often resulting in:

- immediate and ongoing imbalances and deterioration in the local ecosystem
- reduced aesthetic values of bushland and waterways;

(ii) increased incidences of unacceptable levels of turbidity in drainage works, streams and other water bodies;

(iii) increased levels of salinity on lands and in water bodies elsewhere;

(iv) increased frequency and damage caused by flooding downstream and increased frequency of smaller flood events;

(v) erosion damage to natural channels, earthworks and constructed drainage lines; and

(vi) increased "down time" for developers following intense and/or extended periods of wet weather.

(b) Research of Lake Illawarra shows that recent urban development and associated activities have caused the sedimentation rate to increase six times and the nutrient pollution rate to jump 10 times (Illawarra TCM Committee, 1989), resulting in infilling and algal blooms. Studies of Lake Macquarie conclude that sediment loadings (Table 1.1) are likely to alienate approximately 10 to 20 hectares of the lake each year. This sediment loading will have a substantial and possibly irreversible effect on this aquatic ecosystem.

Table 1.1 Estimates of sediment loadings entering Lake Macquarie (SPCC, 1983)

Year	Urban area (ha)	Catchment population	Sediment load (tonnes/year)			
			Urban	Rural / forest	Point sources	Total
pre 1800	–	na	–	6,600	–	6,600
1940	1,460	na	7,700	19,000	–	26,700
1983	110,000	102,000	58,000	16,500	500	75,000
2000 (est)	140,000	129,000	74,000	15,000	500	90,000

(c) Another example shows the impact of urban development on water quality at a 74-hectare a site at Albion Park, despite the installation of what were regarded then as acceptable erosion and sediment controls. At the site (figure 1.1), sediment concentrations increased by up to 3,000 times during the subdivision construction phase. The largest increase resulted from channel reconstruction work undertaken in late February and March, a period of very high rainfall erosivity.

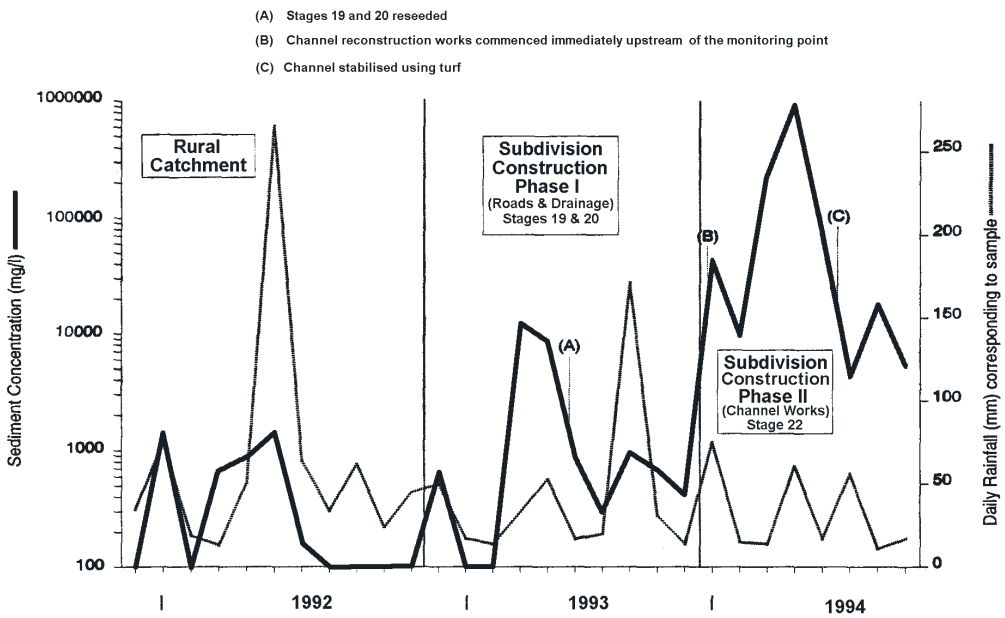


Figure 1.1 Sediment concentrations and daily rainfall at one site at Albion Park (Goldrick and Armstrong (1994))

(d) This manual provides information on planning and management of soil and water resources during any land disturbance activity. It can act as a basis for a substantial reduction in the cost of land degradation resulting from urban and rural residential development. If implemented, the guidelines facilitate maintenance and potential enhancement of the environment for current and future generations.

1.5 Ecologically Sustainable Development (ESD)

(a) The ESD definition that is the most relevant here is that developed by the ESD Steering Committee (1992), namely: ESD uses, conserves and enhances the community's resources so that ecological processes, on which life depends, are maintained and the total quality of life now and in the future can be increased. This definition of ESD can be broken into four objectives:

- sustainable quality of life
- biodiversity conservation
- pollution minimisation
- resource conservation.

The principles of ESD have been adopted by all Australian governments as the basis for policy and program development into the future.

(b) The major challenge in applying environmental policies to land identified for development is to combine the multitude of sectoral policies that affect our quality of

life and the ecological balances effectively. If implemented, ESD policies can help realise the goals of a sustainable quality of life by:

- providing good opportunities for open space
- preserving the landscape and cultural values
- avoiding reductions in biologically significant resources of any given site
- conserving biodiversity
- reducing energy consumption
- reducing pollution discharges in a local and regional perspective. These policies apply to all land, mining and infrastructure developments.

(c) Furthermore, the cumulative impacts of all individual activities are important. Principles need to be focused so that the full importance of sustainable economic and social development for resource use and environmental quality can be encouraged.

(d) ESD is about process as well as product. This means that the ways in which decisions are made are as important as the decisions themselves. ESD should be pursued by planners, consultants, project managers and council officers, when designing, construction and assessing new developments.

(e) ESD can be pursued through the following initiatives:

(i) Community participation in decision-making, especially where specific doubts might occur in relation to the environmental consequences of a project. The best examples are where communities are involved from the earliest stages in a particular planning process.

(ii) Life cycle costing that ensures that ESD benefits are not disadvantaged. In this, capital and recurrent costs of a particular project help decide the most appropriate alternatives on both the project and materials/technology levels.

(iii) Adoption of the precautionary principle. If threats of serious or irreversible environmental damage are possible, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

(iv) Environmental monitoring of key indicators (e.g. soil loss, water quality, asset deterioration, biodiversity, noise, air quality) on an ongoing basis to measure the impacts of the development on key elements of the environment.

(f) The ESD challenge is to view local areas holistically and, in this manual, catchment and downstream impacts. It should link related physical, environmental, economic, social and cultural issues, rather than treating them separately. This creates urban forms that are more sustainable in terms of environmental impact and use of natural resources.

(g) In planning for greater sustainability, a multilayered response to various issues is necessary (i.e. think globally, act locally, respond individually) in relation to energy consumption, air and water quality and species conservation. Ideally, the local issues

will include the control of soil degradation and soil loss during land disturbance activities and an improvement in the water quality and after they are complete.

(h) The following are some examples of ESD that could be implemented by project managers. They are provided to make ESD more understandable:

- create buffer zones between areas of development and remnant habitats
- remediate all contaminated land
- protect exposed soil surfaces from degradation
- use raw materials that have a minimal impact on human health and the environment
- use materials that create minimal pollution and use energy efficient processes in their production
- use materials that are recycled, renewable, recyclable or durable
- recycle stormwater runoff to reduce the consumption of mains water
- intercept and manage stormwater before discharge into natural watercourses
- rehabilitate the site to increase the quality and quantity of the native habitat
- use ecologically benign vegetation for site stabilisation
- use locally indigenous vegetation for landscaping
- ensure site personnel and subcontractors are inducted into the proper procedure for the site and create contractual bonds with penalties to ensure compliance with any soil and water management plan.

1.6 General Principles of Soil and Water Management

1.6.1 Background

(a) Generally, effective soil and water management during a land disturbance phase involves the following seven principles:

(i) assess the soil and water implications of development at the subdivision or site planning stage, including those relating to ESD. Investigate the salinity and, on coastal lands, the acid sulphate potentials of the soils where their disturbance is likely to expose and/or exacerbate this problem;

(ii) plan for erosion and sediment control concurrently with engineering design and before earthworks begin, ensuring proper assessment of site constraints and integration of the various components;

(iii) minimise the area of soil disturbed and exposed to erosion;

(iv) conserve topsoil for later site rehabilitation/revegetation;

(v) control water flow from the top of, and through the development area;

(vi) rehabilitate disturbed lands quickly; and

(vii) maintain soil and water management measures appropriately during the construction phase.

(b) Accordingly, it is desirable that works proceed as outlined in Figure 1.2.

Review the development proposal with the project manager.

▼

Identify necessary physical constraints and opportunities to the development.

▼

Discuss with the project manager methods for:
– addressing physical constraints
– taking advantage of opportunities.

▼

Prepare the conceptual Plan.

▼

Review the conceptual Plan with the development team. Make necessary changes.

▼

Where appropriate, submit the conceptual Plan to the consent authority for approval.

▼

Make changes to the Plan as required.

▼

Where required, prepare the detailed Plan and submit it to the relevant authorities for review. Make changes to the Plan as required.

▼

Undertake development of the site on a phase-by-phase basis (if appropriate), particularly ensuring:
– minimum vegetation is cleared
– upslope and clean waters are diverted from disturbed lands and the sediment control system
– major sediment control works are installed
– progressive rehabilitation
– the Plan is subject to ongoing review.

▼

Construct permanent sediment or nutrient control structures, where appropriate.

▼

Remove temporary sediment control structures.

Figure 1.2 Suggested works sequence

1.6.2 The Work's Program

(a) Implementation of the principles of ESD means that planning for soil and water management will be based on an assessment of the physical constraints present at the site. These are described further in Chapters 2 and 3 and include assessments of:

- rainfall erosivity
- flooding liability
- topography
- soils (erodibility, dispersibility, salinity, shrink swell capacity, drainage characteristics, mass movement potential, etc.).

Only after such assessments have been completed at an appropriate scale is it possible to plan for soil and water management in a practical and constructive manner, and ensure adequate erosion and sediment control standards.

(b) The preparation of site development plans should:

(i) offer solutions that ensure that any development is ecologically sustainable, being considerate of the immediate and eventual effect of development on;
- the quality and quantity of both surface water and ground water
- waterfront (riparian) ecosystems;

(ii) consider the cumulative effect of each particular development program to other developments within the catchment area;

(iii) enable a choice of soil and water management structures and strategies that should consider aspects other than just capital outlays, e.g. environmental considerations, costs relating to maintenance and replacement;

(iv) consider the nature of any specific plan for control of soil erosion, sedimentation and pollution;

(v) be undertaken in concept before and at the development application stage; and

(vi) be undertaken in detail at the final engineering plan stage.

(c) It is not sufficient to retrofit erosion and pollution management strategies to developments that have essentially completed the engineering plan stage.

(d) Elements to be included in plans for soil and water management include:

(i) The phasing of works so that land disturbance is confined to minimum areas of workable size, but consistent with the scale and economics of the development.

(ii) Ensure correct stockpiling of topsoil (Section 4.3.2).

(iii) Minimise the impact of runoff water on the site (Chapter 5).

(iv) Give priority to those BMPs that mitigate soil erosion in the first place, rather than to those that capture sediment downslope or at the catchment outlet (i.e. concentrate on source controls). Diverting upslope waters around works is especially important (Chapter 5).

(v) Install erosion and sediment control measures as a first step in the work's program and maintain these in an effective condition until earthworks are completed and the site rehabilitated (Chapters 5, 6 and 7).

(vi) Integrate soil erosion and sediment control, stormwater and pollution control works (Chapter 6).

(vii) Where appropriate, reduce the effects of wind erosion (Chapter 6).

(viii) Rehabilitate the site to ensure that disturbed lands are stabilised and integrity is maintained (Chapter 7).

(ix) Reduce maintenance needs and other ongoing costs by integrating all soil and water management works in the construction phase (Chapter 8).

(x) Ensure that all erosion and sediment control measures are kept in a functioning condition until all site disturbance works are completed and the site is rehabilitated (Chapter 8).

1.7 Legislation and Policy Requirements

(a) The NSW planning framework under the Environment Planning and Assessment Act (EP&A Act) contains three levels of planning documents. These are:

(i) State Planning Policies that bring together State Government policies relating to environmental planning to:

- provide a state context for Regional Planning
- provide a whole of government issues based , outcome-focussed policies
- provide the social, economic and environmental policies relevant to planning under the EP&A Act
- provide the vision, policies and regulatory provisions to be included in local plans.

They are prepared and approved by the NSW Government in consultation with the community.

(ii) Regional Environmental Plans that contain the regional strategy and direction for the coordination of regional policies to:

- provide the context for regional actions and local planning
- provide a whole of government strategy involving state and local government, business and the community
- provide guidelines for the future development of a region, linking social, economic and environmental issues relevant to planning under the EP&A Act
- provide the vision, policies and action plan.

They are prepared by a regional forum in consultation with the community. Further, they are approved by the NSW Government and can be amended only by the Minister.

(iii) Local Environmental Plans that relate to a single local government area. They coordinate actions and contain all land use controls relating to any particular site. They provide:

- the context for local actions and development assessment
- a whole of council plan, coordinating goals, policies and activities
- a guide to the future of a local area, linking social, economic and environmental issues relevant to planning under the EP&A Act
- a vision, policies, an action plan and regulatory provisions.

The plans are drawn up by the local council in consultation with the community. Further, they are approved by the local council with concurrence of the Minister for Planning.

(b) Table 1.2 contains a listing of NSW Government key policy objectives for managing natural resources.

(c) Table 1.3 outlines the principal roles and responsibilities of the various NSW Government agencies.

Table 1.2 Key Policy Objectives of the NSW Government and its Agencies

State Policy	Key Policy Objectives	References
Biodiversity Strategy	To protect the native biological diversity of NSW and maintain ecological processes and systems.The strategy includes initiatives relating to water reform, vegetation management and the development of a comprehensive and representative reserve system	• Environmental Planning and Assessment Act, 1979 • Threatened Species Conservation Act, 1995 • National Parks and Wildlife Act, 1974 • Native Vegetation Conservation Act, 1997 • Fisheries Management Act, 1994 (See Appendix H)
Coastal Policy	• Protection, rehabilitation and improvement of the natural environment of coastal areas • Protection and enhancement of the aesthetic qualities of the coastal areas • Protection and conservation of the cultural heritage of the coastal areas • Ecologically sustainable development and use of resources • Appropriate public access and use • Provision of information to enable effective management of coastal areas • Integrated planning and management of coastal areas	• Coastal Protection Act, 1998 • NSW Coastal Policy (1997)
Waterfront Lands (Riparian Land Management)	• Habitat protection • Stability of River channels and foreshores • Water quality • Recreation activities • Permits are required for activities within 40 metres of the bank of a river	Rivers and Foreshores Improvement Act, 1948 until November 2003 when it will be repealed by the Water Management Act, 2000 (See Appendix H)
Sediment and Erosion Control	• Prevent the loss of the soil resources from a site. Promotion of sustainable use of this resource. • Control of sediment into creeks, rivers and lakes • That the biodiversity values of the locality be maintained and enhanced	Soil Conservation Act, 1939 Protection of the Environment Operations Act, 1997

Table 1.2 Key Policy Objectives of the NSW Government and its Agencies (continued)

State Policy	Key Policy Objectives	References
Soil Salinity Strategy	• To minimise the impact of salinity on human land use and ecological systems • To prevent potential damage to buildings roads and services, and protect human health	• Taking the Challenge - NSW Salinity Strategy (DIPNR, 2001) • Soil landscape mapping handbooks for various regions in NSW (DIPNR) • WSROC: Salinity Code of Practice (WSROC)
Acid Sulphate Soils Guidelines	• To prepare local plans that identifies land as having a probability of acid sulfate soil. • To encourage the adoption and implementation of acid sulfate soil guidelines in any developments	• Guidelines for the use of Acid Sulphate Soil Risk Maps (DIPNR) • Acid Sulfate Soils Manual (NSW Acid Sulfate Soil Management Advisory Committee, 1998)
Wetlands Management Policy	Encourage the management of wetlands to halt loss of wetland vegetation, biological diversity, declining water quality, productivity and natural flood mitigation. Encourage the restoration and rehabilitation of wetlands	NSW Wetlands Management Policy (DIPNR, 1996)
State Rivers and Estuary Policy	Protection of estuarine habitats and ecosystems in the long term including the maintenance of the necessary hydraulic regime. Preparation of management plans for the sustainable use of each estuary	Estuary Management Policy (DIPNR) Estuary Management Manual (DIPNR, 1992)
Urban Stormwater Program	• Stormwater Trust Grants Scheme to improve urban stormwater quality • Urban Stormwater Education Program • Stormwater Management Plans prepared by Councils to identify problems and propose cost effective solutions	• Managing Urban Stormwater: Council Handbook (EPA, 1997) • Managing Urban Stormwater: Treatment Techniques (EPA, 1997) • Managing Urban Stormwater: Source Control (EPA, 1997) • Managing Urban Stormwater – Soils and Construction (Landcom, 2003)

Table 1.2 Key Policy Objectives of the NSW Government and its Agencies (continued)

State Policy	Key Policy Objectives	References
Flood Prone Land Policy	Preparation of Floodplain Management Plan and strategies of the local council that addresses each of the three flooding hazards that affect flood prone lands. These are: • The existing risk faced by existing developments on flood prone land • The future risk which any new development will face • The continuing risk that remains after flood mitigation actions has been completed	Floodplain Management Manual: The Management of Flood Liable Land (NSW Government, 2001)

Table 1.3 Principal Roles and Responsibilities of the Various NSW Government Agencies

Government Agency	Role and Responsibility
Department of Environment and Conservation incorporating the former Environment Protection Authority, National Parks and Wildlife Service and others www.epa.nsw.gov.au; www.npws.nsw.gov.au	Legislation: Protection of the Environment Operations Act, 1997; Contaminated Land Management Act, 1997; National Parks and Wildlife Act, 1974; Threatened Species Conservation Act, 1995. Role & responsibility: Licensing for pollution control, various water quality guidelines, Urban Stormwater Management Program; care and management of native flora and fauna, threatened species, and Aboriginal places and relics. Can provide information on likely occurrence or location where threatened species of plants or animals can occur.

Table 1.3 Principal Roles and Responsibilities of the Various NSW Government Agencies (continued)

Government Agency	Role and Responsibility
Department of Infrastructure Planning and Natural Resources www.dipnr.nsw.gov.au	**Legislation:** Environmental Planning and Assessment Act, 1979; Heritage Act, 1977; Water Management Act, 2000; Soil Conservation Act, 1938; Native Vegetation Conservation Act, 1997; Rivers & Foreshores Improvement Act, 1948. **Role & responsibility:** NSW Planning Framework, State Planning Policies, approving regional strategies and local environmental plans, NSW Coastal Policy, providing development consent. Management and protection of the water resources of the State including: licensing of extraction of water, diversions or damming of a river, wetlands; management of riparian land and issue of Part 3A Permits; erosion and sediment control plans; floodplain management plans; native vegetation management and issue of development consent for clearing. Provides expertise on erosion control, revegetation, dryland salinity and acid sulfate soils
NSW Fisheries www.fisheries.nsw.gov.au	**Legislation:** Fisheries Management Act, 1994 **Role & responsibility:** Protect aquatic habitats and species; prevent the destruction of fish habitat, the alteration of natural flow regimes of streams, installation of in stream structures that modify flow and restrict fish passage, the removal of large woody debris; the protection of aquatic and riparian vegetation; the reconstruction of habitats including wetlands; and estuary management
Local Councils	**Legislation:** Local Government Act, 1993; Local Government Amendment (ESD) Act, 1997; Noxious Weeds Act, 1993; Environmental Planning and Assessment Act, 1979. **Role & responsibility:** Exercise controls over urban development through the implementation of state environmental policies promulgated in REPs, LEPs DCPs and making development application approvals. Local Government has an increasing role in natural resource management, e.g. preparation of noxious weeds lists

Chapter 2

PLAN PREPARATION

2. Plan Preparation

2.1 Background

(a) Building and development/subdivision works usually require plans or other documents that describe the measures to be undertaken at development sites that, if carried out, should mitigate soil erosion and control discharge of sediment, nutrients and other pollutants to lands and/or waters during works. Typically, these plans contain:

- one or more drawings on which are delineated the layout of appropriate soil and water management works
- a commentary that might be presented as a separate report and/or on one or more plan sheets that contain supporting text, calculations and diagrams.

(b) One of two kinds of plans should be prepared before land disturbance activities occur on any non rural lands where more than 250 square metres are involved. These are either an *Erosion and Sediment Control Plan (ESCP) or a Soil and Water Management Plan (SWMP)*.

(c) The focus of these Plans is erosion and sediment control during the land disturbance phase of development. A separate Plan (e.g. an Integrated Water Cycle Plan) is typically required to address post-construction stage stormwater management. Clearly, these Plans need to be developed in a complementary and integrated manner.

(d) Where less than 250 square metres are being disturbed, no formal plan is required (Table 2.1). However, developers should check with their local consent authority and, in any case, exercise reasonable care where land degradation or pollution to receiving waters or drainage channels might occur.

Table 2.1 Suggested Plan Type

Area of disturbance (m^2)	Nominal type of activity	Suggested type of plan
< 250	house extensions, small driveways, garages	check with local council
250 – 2,500	most houses, long driveways, commercial developments, small subdivisions, small medium/high-density housing, small civil works	*ESCP* addressing soil erosion and sediment pollution only
> 2,500	large subdivisions, large medium/high- density housing, large civil works.	*SWMP* addressing soil erosion and sediment pollution, including a calculation as to the need for a sediment basin

(e) *ESCP*s should be prepared on smaller sites, such as, where more than 250 but less than 2,500 square metres of land will be disturbed. This can include:

(i) minor developments where approval is required from the consent authority; and

(ii) minor civil infrastructure works, including:

- urban and rural road construction and reconstruction
- stormwater pipelines, including culverts
- sewerage pipelines
- water pipelines
- bulk earthworks, including retention basins and sports fields
- electricity, telephone and natural gas lines.

Nevertheless, the consent authority might vary this requirement especially where, in their view:

- a high risk of polluting receiving waters exists, i.e. require a *SWMP* or
- a very low risk of polluting receiving waters exists, i.e. waive the need for an *ESCP*.

(f) *SWMP*s generally should be prepared for all development works where more than 2,500 square metres of land will be disturbed and/or where development consent is required[1].

(g) Also, several Councils have prepared their own guidelines for the preparation of *ESCP*s and *SWMP*s that should be followed. These Guidelines can contain practices that are specific to addressing special situations that exist in their area, such as highly erodible sandy soils or preventing pollution to coastal lakes.

2.2 Erosion and Sediment Control Plans (*ESCP*s)

(a) All *ESCP*s should contain a drawing that clearly shows the site layout and, where appropriate, the approximate locations of BMPs and other matters listed in (b) and (c), below. Where these drawings are to scale, the scale should be at 1:500 or larger. A narrative should accompany the drawing that describes how erosion control and soil and water management will be achieved on site, including ongoing maintenance of structures.

(b) The following background information should be presented on the drawing(s):

- location of site boundaries and adjoining roads
- approximate grades and indications of direction(s) of fall
- approximate location of trees and other vegetation, showing items for removal or retention (consistent with any other plans attached to the application)

1. Many smaller sites requiring *SWMP*s do not require sediment control basins or wetlands. Nevertheless, the need or otherwise should be investigated and conclusions should be clearly documented.

- location of site access, proposed roads and other impervious areas (e.g. parking areas and site facilities)
- existing and proposed drainage patterns with stormwater discharge points
- north point and scale.

(c) On the drawing or in a separate commentary, show how the various soil conservation measures will be carried out on site, including:

- timing of works
- locations of lands where a protective ground cover will, as far as is practicable, be maintained
- access protection measures
- nature and extent of earthworks, including the amount of any cut and fill
- where applicable, the diversion of runoff from upslope lands around the disturbed areas
- location of all soil and other material stockpiles including topsoil storage, protection and reuse methodology
- location and type of proposed erosion and sediment control measures
- site rehabilitation proposals, including schedules
- frequency and nature of any maintenance program
- other site-specific soil or water conservation structures.

(d) Further information on the preparation of *ESCP*s for particular land disturbance activities is detailed in Chapters 9 and Volume 2 of these guidelines and in a separate field guide giving an example of an *ESCP* for the construction of single dwellings.

2.3 Soil and Water Management Plans (*SWMP*s)

2.3.1 Important Considerations

(a) The design objectives of any *SWMP*s should be influenced by competing land use requirements or sensitivities, such as those of other members of the development team (e.g. designers, engineers, town planners, landscapers, ESD consultants, etc.) and others affected by the development, including:

- council policies (e.g. DCPs)
- council's stormwater plan and/or visions for stormwater management
- community requirements
- various government policies and initiatives (e.g. SEPPs, REPs, etc.).

Consequently, any consultant(s) involved in *SWMP* preparation should liaise closely with the project manager or development coordinator to identify the planning needs, constraints and choice of BMPs. Undertake such liaison at the design concept stage and, where appropriate, concurrently with trunk drainage investigations. It is

expected that the requirements of each of these factors will modify the planning for the others so that soil and water management needs are clearly integrated into the development process.

(b) Procedures should provide a mechanism for feedback between those preparing *SWMP*s and those preparing many other plans for the works. In an urban situation, for example, this might include:

- works in or close to a watercourse
- layout of lots, roads, cycle and pedestrian access corridors
- provision of recreation facilities, public open space, or natural heritage reservations
- drainage of stormwater
- provision of services
- rehabilitation of the site.

In planning for an integrated development, these and other requirements will influence and modify planning for each other; soil and water management should not be an ad hoc add-on option. This is particularly important on larger sites (>1,000 square metres to be disturbed). The integration of soil and water management works with the construction program might result in a reduction in maintenance needs.

(c) Further, the various development design processes should integrate engineering and soil and water management planning. Prepare the *SWMP*s at the same time as engineering design for all construction works and include them as part of the final engineering plans. Once engineering plans are complete, integration can be very difficult to achieve. Cross referencing soil and water management planning with site rehabilitation is also important.

(d) Generally during construction, any *SWMP* should seek to achieve adequate control for:

(i) pollution of sediment and other coarse material up to the maximum permitted suspended solid concentration for a defined storm or rainfall event as specified by relevant local government authority in a Stormwater Management Plan and discussed in *Managing Urban Stormwater: Council Handbook (EPA 1997a);* and

(ii) stability of soil and water management structures for all up to the design storm events.

(e) The design storm event for the stability of structures is usually taken as the 10-year ARI time of concentration storm event. Clearly, larger design events can be more appropriate where, for example, the costs of failure of structures warrant it or where required by a local council. Smaller design events are not recommended and should be fully justified. Justification can include situations where the risk of sediment pollution should failure occur is offset by other measures.

(f) Any *SWMPs* should reflect maintenance considerations, especially:

(i) those that might preclude the use of certain soil and water management measures (e.g. provision of adequate access, likely uses of mechanical equipment, etc.);

(ii) flocculation;

(iii) performance and review; and

(iv) ongoing needs throughout and beyond the development phase.

(g) *SWMPs* should reflect the need for changes or modifications to their requirements as development progresses. Revised *SWMPs* might be required where:

(i) changes occur in slope gradients and drainage paths, with their exact form frequently unpredictable before works start;

(ii) works continue over an extended period, with revisions being required at the beginning of the second year of operations and further revisions at 2-yearly intervals after that. Of course, any revised *SWMPs* should reflect reasonable new standards applying then; and

(iii) the desired outcome (e.g. protection of receiving waters) is clearly not being achieved. The *SWMP* is only part of the management strategy with other aspects being appropriate implementation, monitoring and corrective action.

Normally, changes are not expected. Where required, only a suitably qualified person, ideally the person who prepared the original *SWMP*, should undertake such changes.

(h) The *SWMP* should:

(i) be submitted to the relevant authorities for review and comment before appropriate development consent, building approval or other permits/approvals are received;

(ii) contain both a report and a plan of works and should link directly with other plans, reports and documents as appropriate;

(iii) form part of the final engineering design drawings; and

(iv) be documented in the:

- construction plans and/or
- Schedule of Rates or Bill of Quantities.

(i) Plans are normally submitted at two levels: conceptual and detailed. Conceptual plans contain all criteria necessary for a consent authority to make a reasonable decision about whether a proposal could be supported or not. Normally, conceptual plans do not contain engineering drawings of structures. Once the development is approved, a detailed plan should be prepared and submitted before works start, showing clearly all necessary engineering information. The SWMPs shown in Chapter 9 are conceptual.

2.3.2 Data Input

(a) *SWMP*s should be based on an assessment of:

(i) the physical constraints and opportunities to development at the particular site, including those for soil, landform type and gradient, and hydrology (Chapter 3). Accordingly, the soil and water management team should include members with relevant tertiary qualifications or proven skills recognised by the appropriate authorities;

(ii) appropriate measures to overcome those constraints and take advantage of opportunities, including options for:

- staging of works
- mitigation/control of on site soil erosion
- movement of water onto, through, and off the site
- rehabilitation/maintenance of the works area; and

(iii) the way that works will modify the landscape and surface and subsurface drainage patterns (adding new, or modifying existing constraints). In this regard, the *SWMP*s should result from a consideration of layout options, each of which harmonise with the overall planning strategy and with each assessed for economy, aesthetics, function, and ESD criteria.

(b) In addition to all the data required for *ESCP*s (Section 2.2), *SWMP*s require:

(i) the following information:

- the location of lots, public open space, stormwater drainage systems, schools, shopping/community centres
- the location of land designated or zoned for special uses
- existing site contours[2];

(ii) the location and general diagrammatic representations of all necessary:

- erosion and sediment control BMPs;

(iii) location and engineering details with supporting design calculations for all necessary:

- sediment basins; and

(iv) location and basic details of any other facilities proposed to be included as part of the development or works, such as:

- constructed wetlands
- gross pollutant traps
- trash racks or trash collection/separator units
- "water sensitive" stormwater treatment measures, such as bioretention systems, vegetated swales and infiltration measures.

2. Recommended contour interval is 0.5 metres on gradients of less than 15 percent, 1 metre on gradients of 15 to 30 percent and 2 metres for slopes >30 percent.

Detailed design criteria for these latter facilities should be sourced from other manuals/reports and are not an integral part of a construction phase *SWMP*. Usually they are considered as a separate function of the development approval process.

Note that the above listed works should not be located in or very near to watercourses. This is to avoid compromising the values and functions of the watercourses and their current or future riparian zones.

(c) Inspection and Test Plans (ITPs) should be presented as an element of all *SWMP*s. ITPs are documents that detail the inspection, testing and acceptance requirements for specific activities such as those associated with land development. They help with the management and overall control of the work's program. ITPs should:

- relate to specific works at particular locations
- reflect the needs of individual organisations
- reflect the requirements nominated in specific contracts.

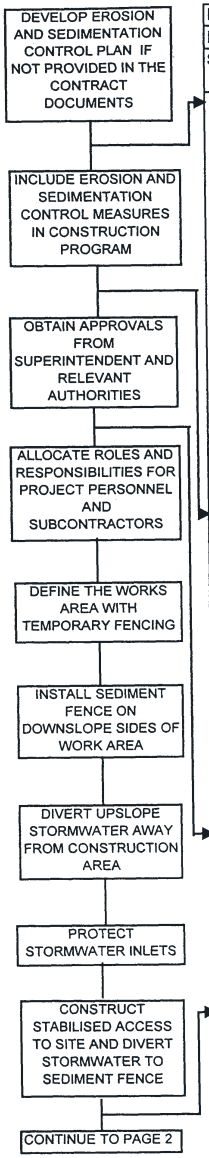
Within this context, they should identify:

- the activity to be undertaken
- the standard or specification compliance that is being sought
- the relevant acceptance criteria the method of inspection and/or test and the frequency at which it is to be performed
- who is responsible for carrying out the inspection and/or test
- what documentation is to be produced as a record of the inspection and/or test.

They should also identify any "witness" or "hold points" required during the works. Witness points are stages at which activities are to be observed while hold points are stages beyond which work must not proceed without authorisation. Figure 2.1 is a sample ITP produced for the construction of a typical residential dwelling and its format should only be regarded as a guide.

(d) Further information on the preparation of *SWMP*s for urban subdivisions is detailed in Chapter 9 of this document. Guidance in the development of *SWMP*s for other development types or activities (e.g. mines, quarries, waste landfills, construction of highways and main roads, installation of services, is provided in Volume 2 of *Managing Urban Stormwater: Soils and Construction*.

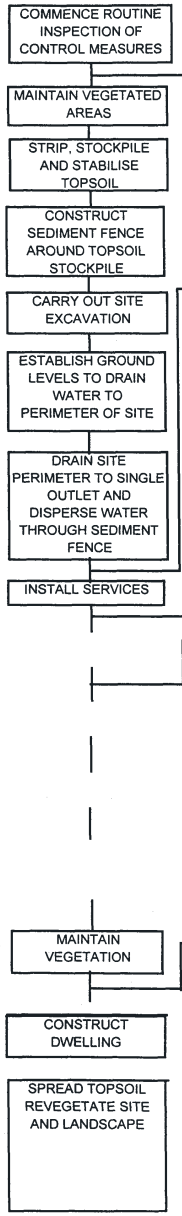
INSPECTION AND TEST PLAN



PROJECT:										INSPECTION TEST PLAN NO: QAIT001	PAGE 1 OF 2
PROCESS: DWELLING CONSTRUCTION EROSION AND SEDIMENT CONTROL (LOTS LESS THAN 2,500M^2)										CONTROLLED COPY NO:	REV: 0
STEP	INSPECTION ACTIVITY	APPLICABLE STANDARD	ACCEPTANCE CRITERIA	TEST		INSPECTORATE			RECORDS/REMARKS	AREA	
				METHOD	FREQ.	SUB	CON	SUP			
1	**Review Erosion and Sedimentation Control Plan (ESCP)**	Chapter 2.0 Chapter 3.0	Plan to minimum scale of 1:2000, locality, contours (initial and final), land slope gradients, critical natural areas (eg. streams and cliffs), catchment boundaries, location of roads and impervious surfaces, existing vegetation and site drainage shown. Limit of clearing, grading and filling defined, location of topsoil stockpiles shown, erosion control practices and sediment control practices Details of site revegetation programme and outline of programme for maintenance of erosion and sediment controls included.	Review	Before start		X		File note of ESCP review		
2	**Review construction program**	Chapter 3.0	Construction of control measures shown completed prior to commencement of work on site. Clearing and grading integrated with design layout, limited to areas of work in progress and staged to immediately precede construction activities. Permanent stormwater drainage works installed as first stage of land development. Installation of utilities co-ordinated.	Review	Before start		X		File note of construction program review		
3	**Confirm all approvals received**	Contract documents	Superintendent approval of ESCP, construction program and subcontractors received. Relevant Authority approvals received.	Review	Before start		H		File note of document review. Superintendent's letter of release from Hold Point		
4	**Confirm site erosion and sediment control measures in place**	Chapter 5.0 Chapter 6.0 Chapter 9.0	Stabilised access, stormwater filters, sediment filter fences, channels, earth banks and level spreader properly located and constructed. Surface flows directed over areas with vegetation to sediment fences.	Visual	Before excavation		H		Site diary note of inspection. Superintendent's letter of release from Hold Point		

Figure 2.1a

INSPECTION AND TEST PLAN



PROJECT:										INSPECTION TEST PLAN NO: QAIT001	PAGE 2 OF 2
PROCESS: DWELLING CONSTRUCTION EROSION AND SEDIMENT CONTROL (LOTS LESS THAN 2,500M^2)										CONTROLLED COPY NO:	REV: 0

STEP	INSPECTION ACTIVITY	APPLICABLE STANDARD	ACCEPTANCE CRITERIA	TEST METHOD	TEST FREQ.	INSPECTORATE SUB	INSPECTORATE CON	INSPECTORATE SUP	RECORDS/REMARKS	AREA					
5	**Check condition of erosion and sediment control measures**	Chapter 8.0	Inspection of erosion and sediment control measures carried out weekly, whenever storms are forecast, during storms and after storms have subsided. Damaged control measures repaired and accumulated sediment removed to non-erodible locations.	Visual	Weekly Storms		X		Site diary note of inspections						
6	**Confirm building area erosion and sediment control measures in place**	Chapter 4.0 Chapter 6.0 Chapter 9.0	Topsoil stockpile, sediment filter fence, channels and earth banks properly located and constructed. Surface flows directed to single outlet and dispersed through sediment fence. Topsoil stockpile stabilised.	Visual	Before start		W		Site diary note of inspection						
7	**Inspect trench restoration**	Chapter 9.0	Trenches backfilled and compacted on completion. Restoration carried out to pre-existing condition.	Visual	At finish	X	S		Site diary note of inspections Service installation Inspection and Test Plan						
8	**Check storage of materials**	Chapter 9.0	All materials stored within site sediment fence.	Visual	Weekly		X		Site diary note						
9	**Inspect site restoration**	Chapter 4.0 Chapter 7.0 Contract Documetns	Ground prepared, treated and topsoil applied to specified depth. Plants, turf and seeding placed in accordance with landscape plan.	Visual	At finis	X	S		Site diary note of inspections Landscape Inspection and Test Plan						
10	**Final inspection**	Contract documents	Disturbed areas reinstated, landscaping in accordance with plan, vegetation healthy and temporary sediment control structures removed.	Visual	At finish		X	W	Site diary note						

LEGEND: SUB - SUBCONTRACTOR CON - CONTRACTOR SUP - SUPERINTENDENT
X - WORK ACTIVITY S - SURVEILLANCE W - WITNESS POINT H - HOLD POINT

Boxes to be initialled and dated when activity for each area has been satisfactorily completed

REFERENCE DOCUMENTS:	PREPARED BY:	ISSUED TO:	REVISION:
MANAGING URBAN STORMWATER: CONSTRUCTION MANUAL	AUTHORISED BY:	DATE:	DATE:

Figure 2.1b

Chapter 3

ASSESSMENT OF CONSTRAINTS AND OPPORTUNITIES

3. Assessment of Constraints and Opportunities

3.1 Introduction

(a) Proper assessment of site constraints and opportunities is a prerequisite to any *Soil and Water Management Plan (SWMP)*. These constraints and opportunities can be classified into two groups:

(i) those at the site, relating to the soil, landform, ecology, pollutants and hydrology; and

(ii) those downstream, relating to aquatic ecosystem sensitivity and the social and aesthetic values of the community.

(b) The assessment:

(i) identifies the nature and degree of the constraints and opportunities relevant to the specific form(s) of intended land use;

(ii) suggests general site-matched measures that address those constraints and opportunities and can be incorporated into plans for soil and water management; and

(iii) offers recommendations to maximise ESD outcomes and prevent degradation of the soil and water resources, and the aesthetic and other environmental assets.

(c) Accordingly, in the study team that undertakes the assessment, one or more members should have appropriate tertiary qualifications or proven skills. These skills should be recognised by the relevant authorities and most likely will include soil science, geomorphology, civil engineering and ecology. Members of the team should have an understanding of ESD.[1]

(d) Generally, the assessment is undertaken at the design concept stage because it helps identify the best soil and water management practices necessary to achieve water quality goals. Some of these practices are structures that require space for optimum function and can require minor modification to the development layout.

(e) At larger "green field" sites, the site assessment information might also be used to derive land capability (Section 3.4). Land capability is the systematic arrangement of land into various categories according to their capability to sustain particular uses without degradation. It gives the planner resource information to optimise the development opportunities of a site, to integrate solutions to overcome constraints, and to implement water sensitive urban design principles to manage stormwater effectively. It is important to cross reference soil and water management planning with site rehabilitation. Further information on the application of water sensitive urban

1. Various accreditation programs are now available. Three examples are:
   - Chartered Professional Engineer (CPEng) offered by the Institution of Engineers, Australia
   - Certified Professional in Erosion and Sediment Control (CPESC) offered by the International Erosion Control Association
   - Certified Professional Soil Scientist (CPSS) offered by the Australian Society of Soil Science.

design principles in response to identified site constraints is provided in the *Managing Urban Stormwater: Urban Design document.*

3.2 Site Constraints

Some important constraints that should be assessed at nearly all land disturbance sites are listed below. The list should not be considered complete, but does identify those constraints necessary to the interpretation of these guidelines that can help minimise land degradation and water pollution at any particular site.

3.2.1 Waterfront (riparian) Lands

(a) Waterfront Lands (formally known as Riparian Lands under the Rivers and Foreshores Improvement Act 1947 (to be repealed)) are those vegetated lands immediately next to waterbodies such as rivers, creeks, estuaries, lakes and wetlands (Appendix J). The vegetation is usually different to that growing further away and reflects the different soils (usually alluvial or littoral) and moisture regimes. The distance the Waterfront Land occurs away from a waterbody varies greatly, depending on factors such as the nature of the waterbody, the local geology and landform. Developments proposed on these lands will require a Controlled Activity Approval under the Water Management Act 2000.

(b) Development on Waterfront Land should be constrained:

(i) to protect and enhance the social, economic, cultural, spiritual and heritage values of waterfront land for Aboriginal groups and the wider community; and

(ii) to avoid or minimise land degradation, including soil erosion, compaction, geomorphic instability, contamination, acidity, waterlogging, salinity hazards and decline of native vegetation.

Where lands were degraded before development, they should be rehabilitated if practical to do so.

3.2.2 Flooding

(a) At the planning stage for urban developments, it is essential that the flood prone lands are identified as a component of the site assessment process. Flood assessments should distinguish between local overland flooding and mainstream flooding. In general terms, the assessments should identify the 2-year ARI flood level (Section 5.2) to help planning for erosion control, especially if an area might be subject to high velocity flows during the land disturbance process.

3.2.3 Rainfall Erosivity

(a) The rainfall erosivity factor, R, is a measure of the ability of rainfall to cause erosion. It is the product of two components: total energy and maximum 30-minute intensity for each storm. In New South Wales, it varies from about 750 in parts of the Western Division to over 10,000 on parts of the far North Coast. This means erosion hazard varies more than 13-fold across the State, all else being equal. Relatively large variations can occur over quite short distances. Near Kiama, for example, it varies from 9,000 on the escarpment to 4,000 on the coast only 25 kilometres away. Rainfall erosivity is described in detail at Appendix A.

(b) In some areas in eastern Australia, rainfall erosivity does not vary much throughout the year. Such areas usually have quite low rainfall erosivities (Appendix B) so, in relative terms, erosion hazards are low. However, local rainfall statistics in many other areas show marked seasonal trends, sometimes accompanied by quite high rainfall erosivities. In such areas, land disturbance programs should take advantage of this statistical information and encourage activities on lands with high erosion hazards or within the 2-year flood line to be undertaken in "drier " months. This risk-based approach recognises that unseasonable rainfall events might occur at unexpected times, both from one year to another and seasonally and is described in more detail in Section 4.4.2.

3.2.4 Soil Erodibility

(a) Soil erodibility is a measure of the susceptibility of individual soil particles to detachment and transport by rainfall and runoff. Soil texture is the principal component affecting soil erodibility, but structure, organic matter and permeability also contribute (Appendix A). Usually, soil erodibility is a quantitative value experimentally determined from a soil sample in a laboratory. In Eastern Australia, it varies commonly from 0.005 to 0.075 – a factor of 15.

(b) In Eastern Australia, soil erodibility commonly varies by a factor of 4 or 5 over very short distances – as little as two or three kilometres. Such changes are usually accompanied by changes in soil types. Because structure, organic matter and permeability contribute to it, soil erodibility can change significantly on any particular soil over a few months through changes in management practices.

3.2.5 Soil Erosion Hazard

(a) Soil erosion hazard refers to the susceptibility of a parcel of land to the prevailing agents of erosion. The control of the soil erosion hazard at a construction site should be a primary tool in the local council's Stormwater Management Plan. The "Soil Loss Class" is a measure of erosion hazard that underpins the erosion control aspects of these guidelines and is described in detail in Table 4.2.

(b) Soil erosion hazard must be distinguished from soil erodibility. Soil erodibility is measured only on a sample of soil taken from the field to a laboratory and put through certain tests; soil erosion hazard is considerate of field conditions and is dependent on a number of factors, including climate (rainfall erosivity), landform, soils (soil erodibility), ground cover and land management.

(c) Effective identification of erosion hazards by a soil survey or other site assessment will enable good planning and land disturbance practices to be implemented. Such practices minimise costs to the developer and, in the longer term, to the wider community. Major costs from soil erosion following storm events over disturbed lands are borne by the community through council rates used to repair adversely affected facilities. For example, sediment, the byproduct of soil erosion, blocks stormwater pipes, reduces the capacity of drainage channels, and exacerbates the impact of other pollutants, especially where it contains significant quantities of dispersible fines (Section 3.2.6). At many sites, individual land owners often have to bear considerable cost by importing topsoil for landscaping or to establish gardens where these have been denuded by soil erosion.

3.2.6 Dispersibility

(a) Dispersible soils are structurally unstable in water and readily split into their constituent particles resulting in turbid water that never seems to clear. The particles can stay in suspension for very long periods, mainly because of negative electrical charges on the surfaces of particles finer than 0.005 mm diameter that cause them to repel each other. Some clay types have relatively few negative charges on their surfaces; some have moderate amounts while others have many charges. Many NSW clays have these charges and, consequently, are dispersible.

(b) The negative surface charges also attract cations (including heavy metals), and phosphorous and ammonium ions. The dispersed clays and silts can carry these pollutants "piggyback" through sediment control structures unless flocculation occurs first.

(c) Those soils regarded as significantly dispersible are those where more than 10 percent of the whole soil fraction is affected. That is, where the percentage of clay (materials < 0.002 mm) plus half the silt (roughly those materials between 0.002 and 0.005 mm) multiplied by the dispersion percentage (Ritchie, 1963) is equal to or greater than 10 (Section 6.3.3(e)).

(d) The process of dispersion can be reversed by shifting the electrical balance through the application of positive ions to the water. This causes the dispersed fines to come together into larger units or "flocs" that can either settle in a reasonable time or be filtered – a process called flocculation. Flocculation occurs naturally under certain conditions, such as are found in estuaries, saline springs and wetlands; chemical

flocculants can be added to sediment basins to help settle dispersed fines (Appendix E).

(e) While both the Emerson Aggregate Test (Emerson, 1967) and Dispersion Percentage tests suggest whether a soil material will disperse, the Emerson test also provides insight to the conditions under which it will disperse. For example, some soil aggregates disperse after being gently placed in water, while others require remoulding or shaking in a 1:5 aggregate:water suspension. In the field, soils that require remoulding to disperse are not usually a major problem unless found in positions where they might be pulverised when wet, such as on access roads.

(f) Further, the Emerson tests shows whether soils slake whereas the Dispersion Percentage test does not. Soils that slake break down in water but do not go into suspension as do dispersible soils, i.e. the particles settle relatively quickly. Soils that slake are much more erodible than those that do not and require special attention in erosion control programs.

3.2.7 Soil Texture Group

(a) Soil texture group is determined by the size distribution of mineral particles finer than 2 mm. There are various methods commonly used to derive particle size, however the one recommended here involves:

- crushing
- end-to-end shaking with a dispersant (usually Calgon)
- sieving
- sedimentation, measured with a hydrometer.

(b) Particle size influences several aspects related to management of soil and surface waters. For example, the effectiveness of sediment retention structures at any particular site is greatly influenced by the nature of the soil materials at the sediment source, e.g.:

- the finer particles (<0.02 mm) can pass through most sediment fences
- clays and silts take much longer to settle than sands in sediment retention basins, if at all.

(c) Particle size ranges are based on the international scale (Hazelton and Murphy, 1992):

- less than 0.002 mm – clay
- 0.002 mm to 0.02 mm – silt
- 0.02 mm to 0.2 mm – fine sand
- 0.2 mm to 2.0 mm – coarse sand.

(d) Subsoils can be grouped into three categories according to the total of the dispersed soil percentage and the proportion in the clay and silt sizes (i.e. <0.02 mm) (it is the subsoils that are most available for erosion on construction sites) as follows:

(i) *"Type D"* soils that contain a significant proportion of fine (<0.005 mm) "dispersible" materials that will never settle unless flocculated.

The other two categories cover those soils that are not dispersible:

(ii) *"Type C"* soils, the bulk of which are coarse-grained (less than 33 percent are finer than 0.02 mm) and will settle relatively quickly in a sediment retention basin; and

(iii) *"Type F"* soils, the bulk of which are fine grained (33 percent or more are finer than 0.02 mm) and require a much longer "residence " time to settle in a sediment retention basin.

(e) Section 6.3.3 requires designs for sediment basins where the soils are *Type F* and *Type D* to be based on total storm capture, while those for *Type C* have much simpler criteria and can normally surcharge. Sediment basins on *Type D* soils require flocculation, while those on *Type F* soils do not.

(f) Sediment control on *Type F* soils is more complicated and greater emphasis should be placed on erosion control. Section 7.1.2 provides guidelines on how this can be achieved.

(g) Some soils are strongly stabilised by iron, meaning that many particles, especially the finer ones, clump together as small aggregates under natural conditions. This reduces the proportion of clay-sized materials and increases the proportion of silts and fine sands in the particle size analysis. Such soils should be mechanically dispersed when undertaking particle size analysis — chemical dispersants such as Calgon should not be used. Remember, too, that chemical dispersants do not normally fall with rainfall, so always use mechanically dispersed data in erosion and sediment control considerations, e.g. to derive the K-factor and assessing whether the soils are *Type F* or *Type C*.

3.2.8 Expansive or Reactive Soils

(a) Most soils shrink or swell depending on changes in their moisture content. Soils that significantly shrink on drying and swell on wetting can cause problems for many structures, including earth-walled sediment basins, buildings, services and roads. They are called expansive or reactive soils. Whether soils are expansive or reactive depends upon their clay content and mineral types.

(b) Day-to-day variations in shrinkage and swelling can be affected by any factor that changes soil moisture levels including:

- rainfall
- evaporation demands
- the presence of tree roots, leaking pipes and groundwater seepages.

Of course, the effect of each of these at any particular time is constrained by antecedent soil moisture conditions.

(c) Linear shrinkage is one way of measuring the one-dimensional shrinkage of a soil placed in a mould at its liquid limit, then oven-dried at 105OC for 24 hours. It is expressed as a percentage of the original dimension and suggests the relative shrink-swell potential of a soil. Problems can occur in interpreting results where the soil is dispersible (Mills *et al.*, 1980) (Section 3.2.5). General information on interpreting linear shrinkage is in Charman and Murphy (2000).

(d) In the field, expansive or reactive soils can be identified when dry by surface features such as cracks that are 6 mm or more wide, 300 mm or more deep and at least one crack occurs per square metre. Usually, such soils have medium to heavy clay subsoils and depths greater than 500 mm.

3.2.9 Runoff Coefficient

(a) Accurately predicting the coefficient of runoff from construction sites is essential because the information is used in several key calculations, including sizing of sediment basins. Two types of runoff coefficient may need to be considered. Conventional "peak flow" runoff coefficients apply to the design of certain structures, such as stormwater conveyance systems and sediment basins on *Type C* soils. "Volumetric" runoff coefficients, which express the fraction of rainfall expected to run off, are employed in the design of sediment basins on *Type F* and *Type D* soils. Each of these parameters vary from site-to-site and from time-to-time in response to:

- catchment shape, size and slope
- drainage patterns
- surface condition, soil type and vegetative cover
- rainfall depth and/or intensity.

(b) Different ways of estimating coefficients of runoff have developed to deal with different applications. These apply to natural (rural) catchments, urbanised catchments and highly disturbed catchments, including construction sites. These are outlined at Appendix F.

3.2.10 Unified Soil Classification

(a) The Unified Soil Classification System (USCS) is an engineering classification based on the particle size distribution and the characteristics of the soil's fine fraction (Corps of Engineers, 1947). It is particularly relevant when applied to those materials used in engineering structures, such as sediment retention basins and other soil conservation structures.

(b) The USCS has a major advantage over many other systems in that soils can be easily classified by experienced persons in the field. However, it does require an understanding of soil properties that are beyond the scope of these guidelines. For further information on the system, refer to Charman and Murphy (2000).

3.2.11 Soil pH

(a) Soil pH is a measure of the acidity or alkalinity of a soil. It relates to the concentration of the hydrogen ions (H^+) in the soil solution measured on a negative logarithmic scale of 1 to 14. The concentrations of hydrogen ions are equal to the hydroxyl ions (OH^-) at pH 7, greater below pH 7 (acid) and fewer above (alkaline).

(b) In the urban environment, the importance of pH is usually confined to its effect on the availability of elements in the soil and, therefore, possible deficiencies and/or toxicities. Whether these elements are available to plants depends on their solubilities, being available only when in soluble forms. Solubilities of different elements vary according to pH. Most "essential" plant nutrients are in their most soluble forms around pH 6 to 7.

(c) Soils in NSW commonly have pH levels from 4.5 to 5.5. At these levels, Hazelton and Murphy (1992) suggest that many nutrients essential for plant growth have very low solubilities. However, native plant species have adapted to these conditions and can obtain sufficient nutrients to sustain growth; most exotic plant species do not have this ability and cannot survive. Consequently, altering the pH by artificial methods can result in an "invasion" by exotic weeds.

(d) Lime can be used to amend low soil pH problems. However, this might not solve other nutrient concerns if the elements are deficient anyway – it simply ensures that the elements are in a form available to plants for growth. Note, too, that lime is a flocculent (Section 3.2.6, Appendix E).

3.2.12 Watertables

(a) In Australia, permanent watertables are found in most places if one bores deep enough. They are easily identified because free water flows into the bore hole. Many plants cannot grow in the watertable or the 500 to 800-mm capillary fringe above them because of reduced aeration and, often, the presence of high levels of soluble salts.

(b) However, another type of watertable can also occur that is not so easy to identify because free water is not always present. The movement of water in upper soil layers can be impeded by relatively impermeable layers of clay or rock fairly close to the surface. Here, perched watertables can form, sometimes seasonally following weather patterns, other times more regularly following changes in land uses and vegetative cover. Soil scientists can identify the presence of these perched watertables, even if they are intermittent or seasonal. More often, they are identified by various soil-related features such as certain soil colours and the presence of mottles rather than by free water.

(c) The design of various soil and water management works can be influenced by the presence of watertables near the surface, no matter whether seasonal or permanent. This is especially important for consideration of management practices that rely on vigorous plant growth because many plants will not grow well where salt levels are relatively high or in reducing conditions, even if such conditions are only seasonal. In addition, the foundations for many structures can be affected adversely if excessive moisture fluctuations occur in their vicinity.

3.2.13 Salinity

(a) Salinity results from the accumulation of soluble salts on the soil surface. Commonly these salts are chlorides, sulfates or carbonates of sodium and magnesium. The source of the salts is variable, but can be attributed usually to mineral weathering of marine sedimentary rocks and to saline wind-borne particles. Watertables either natural or induced can increase the potential of salinity to occur. When changes in land uses result in an impediment to drainage in the soil profile or an overall upward movement of water in the soil profile, these salts are brought into the root zone.[2]

(b) Salt accumulation in soils can have a profound and devastating effect on urban land developments, causing damage to building foundations, the breaking up of road pavements, and the corrosion of pipes and underground services. It can cause non salt-tolerant vegetation to die and, because of the greatly reduced ground cover, result in a dramatic lowering of the *C*-factor (Appendix A) with consequent increases in erosion hazards. Erosion hazard increases can also come about through high levels of salts in the soil changing soil structural characteristics, thereby preventing water infiltration and leading, in turn, to increased levels of runoff. Ecosystem health in streams downslope from saline lands can be adversely affected.

(c) To identify lands that are potentially at risk from salinity, refer to Appendix C listing constraints to many soil landscapes identified in the Department of Infrastructure Planning and Natural Resources (DIPNR) 1:100 000 soil landscape mapping program. In addition, salinity potential maps are available from the DIPNR. These documents enable developers and councils to assess potential salinity for particular areas as a basis for the design and implementation of preventive and remedial actions.

2. Such circumstances can arise, for example, when trees are cleared on hillslopes with a marine-based lithology. Where this reduces transpiration and promotes rises in watertables, dryland salinity can be instigated.

3.2.14 Acid Sulfate Soils

(a) Acid sulfate soils are a major environmental problem affecting lands on Australia's coast. They form when soils naturally containing iron sulfides are oxidized, forming sulfuric acid. Oxidation can occur when they are exposed to the air after having been dug up or drained. Large-scale drainage of coastal flood plains for flood mitigation, urban expansion and agriculture has exposed many areas of acid sulfate soils in NSW.

(b) The high acid levels in water and the heavy metals consequently released from the exposed or drained soils cause significant environmental problems such as poor water quality and large fish kills, and economic costs to communities through degradation of roads and corrosion of pipes and footings.[3] A major problem with acid sulfate soil is that they lower the pH to levels where aluminium becomes soluble (Al3+). While aluminium is the second most abundant element found naturally in soils, it is usually found in an insoluble form because soil pH is usually between 5.5 and 8.0. The soluble forms are toxic to most plant and animal life.

(c) The occurrence of potential acid sulfate soils in New South Wales can be identified by reference to either the local *Acid Sulfate Soil Risk Map* prepared by and available from the DIPNR, and/or by reference to the local council's Acid Sulfate Soil Planning Map if developed and adopted by them as part of their Local Environmental Plan. Accompanying assessment guidelines provided by some councils help persons proposing activities likely to disturb potential acid sulfate soils.

(d) The Acid Sulfate Soil Manual (Stone, *et al*, 1998) has been prepared by the Acid Sulfate Soil Management Advisory Committee (ASSMAC) providing comprehensive information on planning, assessment and management of acid sulfate soils. The Manual forms part of a "whole of government" approach to the management of acid sulfate soils in New South Wales. The manual is available from the DIPNR.

(e) If acid sulfate soils are suspected of being present on the site an Acid Sulfate Soil Assessment should be carried out in accordance with the Acid Sulfate Soil Manual. These guidelines provide recommendations on the type and nature of the site investigations, the number of soil profiles required for assessment and the recommended laboratory analysis techniques and interpretation of results.

(f) If acid sulfate soils are confirmed to be present and are to be disturbed by a proposed activity, an Acid Sulfate Soil Management Plan should be developed in accordance with the Acid Sulfate Soil Manual. The Acid Sulfate Soil Management Plan should outline all potential environmental impacts and include any potential

3. The solubilities of most elements (and their availability to living organisms) are greatly affected by pH. For example, aluminium becomes progressively more soluble at pH levels less than about 5.5 and, consequently, available for ingestion by living organisms. In its soluble form, aluminium is highly toxic.

impacts to the proposed development/infrastructure, and detail appropriate mitigation strategies.

(g) The Acid Sulfate Soil Manual also provides information regarding the assessment and approval process and matters that should be included in an application for approval of works. The Manual also addresses matters that approval authorities should consider in making a decision in relation to works disturbing acid sulfate soils.

3.2.15 Soil Contamination/Toxicities/Pollution in Soils

(a) Soil contamination can result from the actions associated with previous land uses where chemical concentrations have accumulated over time and, now, pose significant health risks to potential new occupiers and to the environment. These sites include cattle and banana dip sites, timber preservation processing sites, and chemical and petroleum product manufacturing and distribution sites.

(b) The management of contaminated land is shared by the EPA, DIPNR and local councils. Under this framework, the EPA is empowered under Part 3 of the Contaminated Land Management Act (1997) to regulate contaminated sites that pose a significant risk of harm to human health or the environment. Other contaminated sites that do not pose significant risks to health or the environment and might be suitable for other land uses are managed by local councils through the land use planning process.

(c) A series of guidelines prepared by the EPA set out considerations for those who encounter contamination and outline a process for proceeding where uncertainty exists. The EPA has now been incorporated into the Department of Environment and Conservation (DEC), and these guidelines are available from the DEC website in the publications section. The DEC website is at:

www.environment.nsw.gov.au

3.2.16 Mass movement

(a) Two general types of mass movement are common: movement of colluvial material down steep slopes and movement of deep subsoils on slopes of various gradients.

Figure 3.1 Landslip in the Picton area of New South Wales.

(b) The most common triggering agent for mass movement is water in the slip zone that reduces shear strength and increases slope loads. Studies suggest that most landslips occur in very wet periods following long dry spells, especially on hillslopes facing the rain bearing winds.[4] Other common human induced landslip generating factors include:

- removal of material from the toe of a slope (especially on or below a former slip plane)
- concentration of surface water or groundwater in slip-prone areas
- removal of trees and other plants that might "pump" the watertable downwards.

(c) The identification of existing and potential areas of mass movement, including landslip and earthflow, is an important part of the soil survey process. Areas with risk of failure have particular combinations of slope gradient, aspect, site drainage, soil type, geology and climatic features. Identification of these parameters enables erosion control planners to decide which areas should be avoided and are suitable for construction of soil and water management works.

(d) Specialised geotechnical investigations should be undertaken if earthwork construction is proposed on landslip-prone lands.

4. Slip zones usually have very low shear strengths and often have plastic clays (e.g. CL or CH soils). When dry, the profile often cracks because of high shrink-swell ratios allowing water to quickly enter the slip zone.

3.3 Data Collection

3.3.1 Soil Data

(a) Commonly in New South Wales, existing soils' information is adequate and a separate soil survey is not necessary, e.g. soil landscape information published by the DIPNR. In certain circumstances, more detailed levels of information might be required, such as, where sites are upslope from lands or receiving waters considered "sensitive", where a detailed land capability survey is required or where further site-specific information is required, e.g. suitability for on site domestic waste water disposal. In these circumstances, where appropriate guidelines for collection of site data exist, they should be followed. Such information can include:

(i) site characteristics, e.g. topography (slope gradient and aspect), landform attributes (site morphology, slope morphology, landform elements), site condition (percentage ground cover, current condition, expected dry condition), lithology (rock outcrop, identification method, substrate material, lithology), hydrology (presence and depth of free water, permeability, profile drainage), erosion hazards, salinity, erosion, etc.;

(ii) soil and regolith characteristics, e.g. layer depth, colour, mottles, pH, layer boundary, soil water status, field texture, structure (grade, size, shape), ped coating, fabric, coarse fragments (type, amount, size), pans, segregations, consistence, lithology of parent material, etc.;

(iii) laboratory data, including; particle size analysis (<0.002 mm, 0.002 to 0.02 mm, 0.02 to 0.2 mm, 0.2 to 2.0 mm and 2 to 75 mm) (AS 1289 C6.2) dispersion percentage (Ritchie, 1963) and Emerson Aggregate Test (AS 1289 C8.1). Note: with strongly subplastic soils (generally, those stabilised by iron and red in colour, e.g. Krasnozems) particle size analysis for determination of erodibility should be undertaken without the use of dispersing agents, such as Calgon;

(iv) other information at the discretion of the soil scientist to support designation of constraints and in consideration of any land use requirement's table, e.g. electrical conductivity (Rayment and Higginson, 1992), USCS, etc.; and

(v) various derived data including Principal Profile Form (Northcote, 1979) and/or Australian Soil Classification (Isbell, 1996), profile permeability class, and other attributes chosen at the discretion of the soil scientist, e.g. soil wet strength, mass movement hazard, etc.

(b) A separate soil survey might be necessary where information detailed in (a) above does not exist. In this case:

(i) Examine soil profiles to a depth of at least 1.5 metres or maximum depth of proposed disturbance and/or to bedrock; and

(ii) Use the New South Wales Soil Data Cards available from SALIS for recording field data and enter the completed cards into the NSW Soil and Land Information System (SALIS). Field methods and terminology are given in McDonald *et al.* (1990) and Abraham & Abraham (1996).

(iii) Specify sampling intensity in consultation with the project manager. Nevertheless, as a general guide on sites larger than five hectares:

- Record at least five site observations and one detailed soil profile description (including completion of Soil Data Cards) for each landform element within each lithology or regolith unit, or at least five detailed soil profile descriptions (and Soil Data Cards) for each unique soil unit identified, whichever is the more intensive
- Sampling intensity should also reflect mapping scale with recommended densities in the range of 10 to 20 detailed soil profile descriptions per hectare at 1:1,000 scale, 0.5 to 1 per hectare at 1:5,000 scale, and 1 to 2 per 10 hectares at 1:10,000 scale. (If sampling sites are evenly spread, they will be generally no more than 30 millimetres apart on the map)
- About 20 percent of the detailed soil profile descriptions should also be subject to laboratory analysis and this should include at least one analysis of each major soil horizon in each unique soil unit identified.

(iv) Where ecologically sensitive areas are likely to be affected, a detailed land capability assessment can be necessary. Alternatively, other more site-specific issues (e.g. on site domestic waste water disposal) must be considered, in which case the minimum sampling intensity described above might not be sufficient. In this case, sampling intensity should be based on the appropriate specific issue guideline, or otherwise determined in consultation with the project manager. Sampling intensity is likely to be less on smaller sites, particularly those smaller than 1 hectare.

3.3.2 Other Data

Separate map(s) of the following data are not usually required. Nevertheless, the information should be available for presentation, if requested for example, as part of a land capability assessment (Section 3.4) and at a scale of 1:10,000 or larger.

(i) lithology or regolith features if available from existing data;

(ii) slope – classes chosen at the discretion of the soil scientist, but with a minimum of three between zero and 30 percent gradient and meeting Soil Loss Class requirements (Section 4.4.2(b));

(iii) landform element (McDonald, *et al.*, 1990) – classes chosen from Table 3.1;

(iv) soil type – soil units chosen at the discretion of a soil scientist;

(v) where appropriate, ground water resources/aquifer recharge areas; and

Table 3.1 Landform Elements (Abraham and Abraham, 1996)

Site process		Site morphology				
		Crest, hillock or ridge	**Slope**	**Flat**	**Open depression**	**Closed depression**
denudational	residual	hillcrest plateau		plain	drainage depression	
denudational	transportational	cliff cone tor	bench cliff/scarp hillslope landslip	bench scald	alcove drainage depression gully	cirque crater sink hole/doline
denudational	depositional		footslope pediment scree talus		drainage depression gully	maar
alluvial, lucustrine or littoral		bar beach ridge levee prior stream scroll	bank beach fan	backplain channel bench flood-out plain rock flat rock platform scald tidal flat valley flat	drainage depression estuary streambed stream channel swale tidal creek	lagoon lake oxbow pan/playa sink hole/doline swamp
aeolian		dune foredune lunette		scald plain	blowout swale	blowout swale
disturbed		dam embankment mound	berm cut face embankment	cut-over surface fill top	trench	pit

(vi) other appropriate attributes that might affect locations of stockpiles, fill zones, etc. especially from an ESD perspective.

3.3.3 Some Data Sources

Various sources of soils, climatic and geomorphic data that might be applicable to particular lands in New South Wales include:

(i) Appendix C of this manual;

(ii) the local council;

(iii) various handbooks, manuals and reports published by the DIPNR, e.g.

- the soil landscapes of some of the 1:100,000 and 1:250,000 topographic sheets for New South Wales – contact:

  Information Centre
  DIPNR
  GPO Box 39
  SYDNEY NSW 2001 – phone: (02) 9228 6415

- detailed soil profile information for various places throughout New South Wales – contact:

  The Manager, SALIS
  DIPNR
  PO Box 3720
  PARRAMATTA NSW 2124 – phone: (02) 9895 6204.
  http://www.dipnr.nsw.gov.au/care/soil/salis/
  Data is free for regular contributors.

3.4 Data Application

(a) More often than not, the data collected through application of Sections 3.1 to 3.3 is not presented formally in separate documents. Nevertheless, the data underpins the choice of management practices described in any *Soil and Water Management Plan* (Section 2.3.2).

(i) At some larger (usually "green field ") sites, the local consent authority might require the above information to be presented as part of a land capability study. Apart from helping determine various planning issues, site information collected by such studies can also help confirm the suitability of lands for the application of various BMPs. Further guidance is provided in this regard in the Managing Urban Stormwater: Urban Design document.

Table 3.2

Class	Description
1	The particular land use is acceptable, with any land, soil or water constraints occurring only at a low degree. Standard design, construction and management techniques can be used
2	The particular land use is acceptable. However, one or more land, soil or water constraints exist at a moderate (but not high) degree that are likely to require specialised management and/or construction techniques
3	The particular land use might not be acceptable. One or more land, soil or water constraints occur at a high degree that should be the subject of further detailed investigations into the appropriate geotechnical/engine_er_ing, and/or soil/water conservation matter
X	This special class includes areas with a very high variability of land, soil or water constraints that are unable to be delineated adequately at the scale of mapping and/or where further detailed site investigations are necessary

The Land Capability Classes

(b) Present maps of capability separately for each form of intended land use that clearly identify:

(i) the capability classes (Table 3.2); and

(ii) other appropriate constraining properties relating to the site. A possible listing of some relevant climatic, geomorphic and pedologic constraints that might apply, with the degree of each constraint categorised.

(c) Label each similar land unit in the mapping process with a mapping code. For consistence, it is recommended that the first code in each homogenous mapping unit on the:

(i) land unit map/overlay be the geological code, followed in order by codes for slope, landform element and soil type

(ii) land capability map/overlay/table should be the land capability class, followed by codes representing the constraints. Show these latter symbols only where the degree of constraint is high (listed first and in uppercase) or moderate (listed second and in lowercase). Symbols do not need to be presented where the degree of constraint is low.

(d) Provide a plain-English report with various maps, ensuring the main body is presented in a format that can be understood by people who do not necessarily have a scientific background, and include:

(i) an outline of the study aims;

(ii) a synopsis of the physical attributes of the site, including data to support the various maps;

(iii) a description of any landscape, water and soil constraints, including:
- identification of lands best/least suited to the proposed development
- alternatives/options available
- location of likely buffer areas and drainage reserves;

(iv) address suggestions about how those constraints, including possible options might be incorporated into a Soil and Water Management Plan (Section 3), for:
- staging of works
- mitigation/ control of onsite erosion
- movement of water onto, through and off the site
- mitigation/ control of flooding/pollution to downslope lands and waterways
- rehabilitation/maintenance of lands; and

(v) recommendations that ensure sustainable development and prevent unacceptable degradation of the soil and water resources, and the aesthetic and other environmental resources.

(e) The appendixes should contain:

(i) detailed soils information including copies of the Soil Data System's "Plain-English Reports", and complete laboratory results;

(ii) a brief description of any laboratory techniques used; and

(iii) rainfall intensity frequency duration (IFD) tables.

Chapter 4

EROSION CONTROL: MANAGEMENT OF SOILS

4. Erosion Control: Management of Soils

In this chapter, Section 4.1, Section 4.2 and Section 4.3 apply to all works where more than 250 square metres of land will be disturbed and requires the preparation of either an *ESCP* or a more detailed *SWMP* (Chapter 2). Section 4.4 applies only to sites where 2,500 square metres of land or more will be disturbed and a *SWMP* is required.

4.1 Introduction

The risk of erosion at land development sites is usually proportional to how much soil is exposed to erosive elements through loss of vegetative cover. Vegetation:

(i) binds the soil particles together and reduces the erosive effects of rain splash impact, surface water flow and wind;

(ii) can decrease wind and water velocity on the ground surface;

(iii) decreases the quantity of surface water runoff through an increase in interception water, depression storage and infiltration (figure 4.1);[1] and

(iv) helps retain sediment and nutrients on site.

The combined effect of these qualities of vegetation can result in a reduction in potential erosion to less than 1 percent of that with no vegetative cover (i.e. *C*-factors of less than 0.01 (Appendix A)). Other ground covers and soil surface protective measures can also reduce erosion, but to varying degrees of effectiveness (Section 7.4).

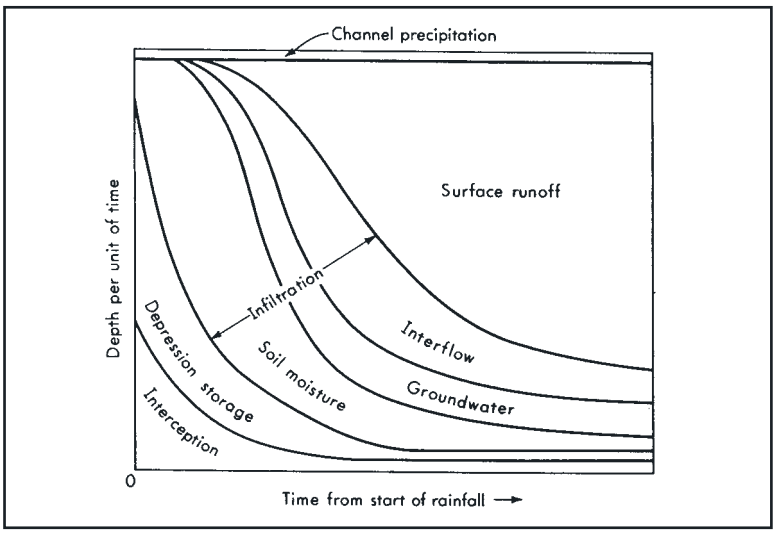


Figure 4.1 Division of storm rainfall into its component parts assuming constant precipitation (Morisawa, 1968)

1. Note:
   - soil structural decline and consequent reduction in soil permeability commonly results from loss of vegetative cover
   - increased infiltration does not necessarily result in rises in the watertable where corresponding increases in evapotranspiration from plant growth occurs
   - to avoid soil salinisation, the watertable needs to be closely monitored for saline content in areas used to increase infiltration or surface runoff.

4.2 Planning Considerations

(a) Where practicable, schedule the construction program so that the time from commencement of land disturbance activities to rehabilitation is less than six months. Restrict land disturbance to areas of workable size. Lands next to waterways should remain undisturbed for as long as possible and at least until the installation of culverts.

(b) Where possible, do not extend land disturbance activities beyond five (preferably two) metres from the edge of any essential construction activity other than in access areas (Table 4.1). These zones of restricted access might require clear identification with barrier mesh, sediment fencing, or other appropriate materials.

Table 4.1 Works limitations

Land use	Limitation	Comments
Construction areas	Disturbance to be no further than 5 (preferably 2) metres from the edge of any essential construction activity as shown on the engineering plans	All site workers should clearly recognise these zones that, where appropriate, are identified with barrier mesh (upslope) and sediment fencing (downslope), or similar materials
Access areas	Limited to a maximum width of 10 metres	The site manager should determine and mark the location of these zones on site. They can vary in position to best converse the existing vegetation and protect downstream areas while being considerate of the needs of efficient works' activities. All site workers should clearly recognise their boundaries which, where appropriate, are marked with barrier mesh, sediment fencing, or similar materials
Remaining lands	Entry prohibited except for essential thinning of plant growth	All site workers clearly recognise this land by marking boundary with barrier fence, etc.

4.3 Handling Soils

4.3.1 General erosion control guidelines

(a) Where possible and where more than 1,000 square metres of land are to be disturbed, ensure that slope lengths do not exceed 80 metres immediately before forecast rainfall or during shutdown periods. Any temporary diversions should outlet to stable discharge areas. On highly erodible lands, constructing earth banks (catch drains) at intervals of less than 80 metres might be necessary to reduce erosion hazards further.

(b) Where necessary, shorten steeper slopes through construction of mid-slope berms (figure 4.2) or other water diversion structures (Section 5.4.4).

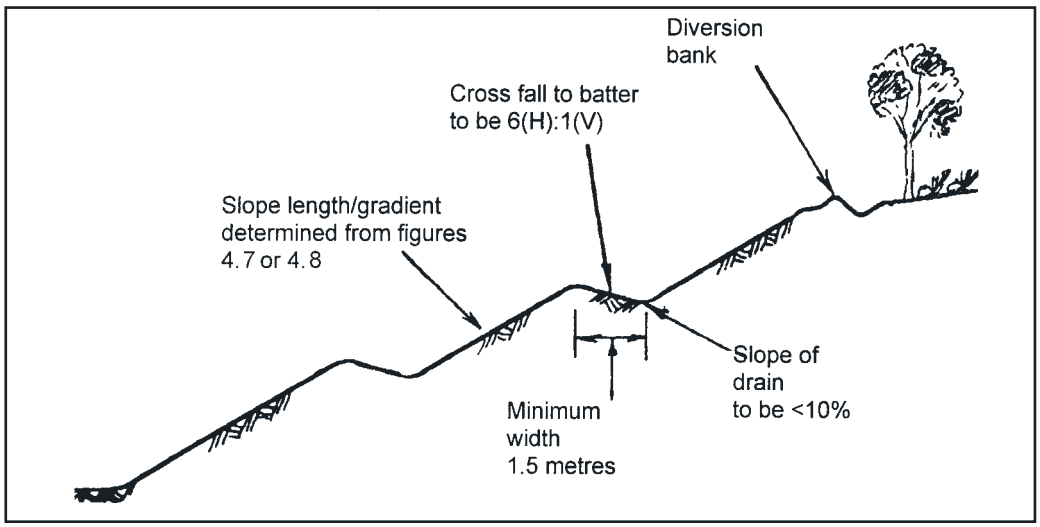


Figure 4.2 Construction of a berm drain.

4.3.2 Topsoil handling procedures

(a) Ideally, handle topsoil only when it is moist (not wet or dry) to avoid decline of soil structure.[2]

(b) Undertake stripping and stockpiling of topsoil immediately before starting bulk earthworks. Before stripping:

(i) Identify and mark out those areas of vegetation or trees that are to be retained on the site. Commence clearing of trees and shrubs that are within the areas

2. Many types of topsoil are liable to be pulverised if they are too dry when handled and/or pug (set very hard in large clods when dry) if they are too wet when handled.

designated for berm drains, roadworks, interallotment drainage, etc. and stockpile the cut vegetative materials for mulching on site. Separate other debris including fence posts, wire, rocks, etc.; or alternatively

(ii) Slash or graze the site where vegetative growth is dense.[3]

(c) Where necessary, thin plant growth outside the construction zone by hand or rubber-tyred implement. Retain small branches, leaf litter and other residues as mulch.

(d) Take particular care when handling noxious plants that viable parts are not transported offsite by machines.

(e) See Section 5.3.4 regarding the construction of temporary culverts or causeways that might be necessary to cross drainage reserves during the stripping or stockpiling process.

(f) Strip topsoil usually to a depth of 100 to 150 millimetres.

(g) Where maintaining seed viability is desirable, ensure stockpiles of topsoil and leaf litter from remnant native bushland areas are no greater than 2 metres deep and kept weed-free. Structural decline in topsoil is likely in deeper stockpiles.

(h) Ensure stockpiles (Standard Drawing 4-1) are:

(i) constructed on the contour at least 2 (preferably 5) metres from hazard areas, particularly likely areas of concentrated water flows, e.g. waterways, roads, slopes steeper than 10 percent, etc.;

(ii) stabilised if they are to be in place for more than 10 days (Section 7.1.2 (d));

(iii) protected from run-on water by installing water diversion structures upslope (Section 5.4.4); and

(iv) formed with sediment filters placed immediately downslope to protect other lands and waterways from pollution (Section 6.3.7 (e)).

(i) Use topsoil on all lands to be rehabilitated by vegetative means.

(j) Normally, rehabilitate constructed slopes steeper than 2(H):1(V) by non vegetative means such as riprap.

(k) Before spreading topsoil, scarify the ground surface along the line of the contour to break any compacted and/or smooth materials[4] and enable key bonding of the materials to one another.[5] Do not apply topsoil to batters where keying is not possible (Standard Drawing SD 4-2).

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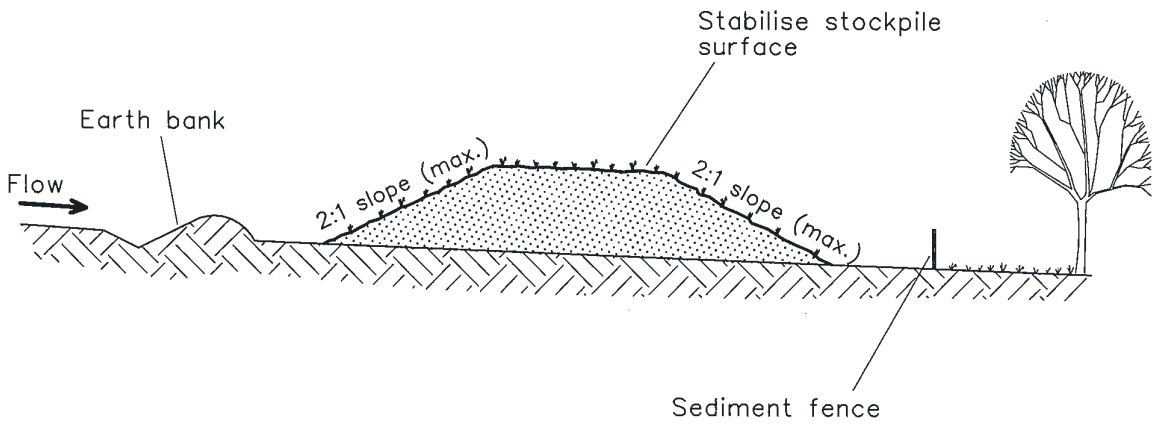
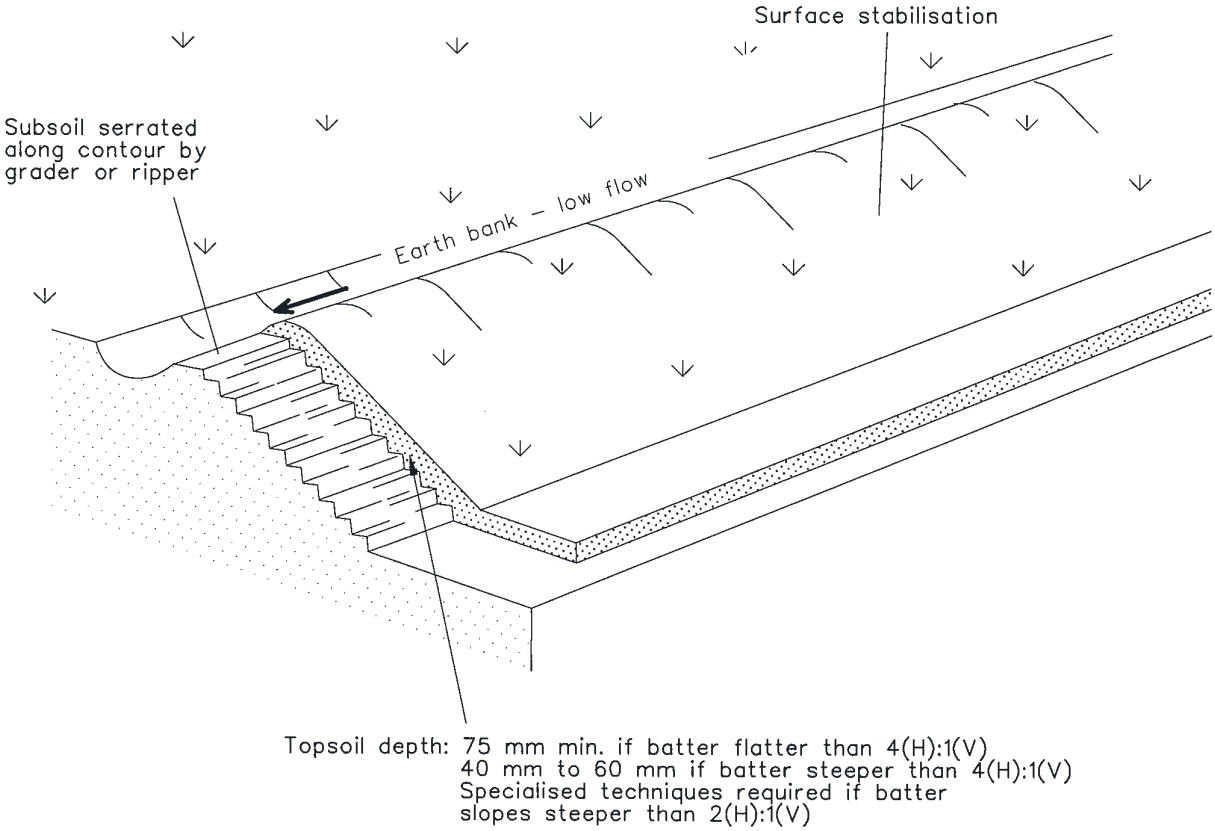
3. Consider stockpiling some or all of any slashed materials for later redistribution to the site as mulch (Section 7.4.1).
4. On constructed slopes less than about 3(H):1(V), scarify with tined implements or excavators to depths of 50 to 100 mm. On gradients steeper than about 3(H):1(V), chain or harrow to break any surface seals and fill any minor rills; alternatively, surfaces can be track-walked (using a crawler tractor driven up and down the slope leaving tread imprints parallel to the contour) (figure 4.3).
5. Keying binds topsoil and substrate layers and, so, mitigates the possibility of sheet erosion and/or creep or slump of topsoil; and enhances water infiltration to the upper subsoil layers, increasing moisture storage within the root zone.



Construction Notes

1. Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
2. Construct on the contour as low, flat, elongated mounds.
3. Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
4. Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the C-factor to less than 0.10.
5. Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

STOCKPILES **SD 4-1**



Construction Notes

1. Scarify the ground surface along the line of the contour to a depth of 50 mm to 100 mm to break up any hardsetting surfaces and to provide a good bond between the respread material and subsoil.
2. Add soil ameliorants as required by the ESCP or SWMP.
3. Rip to a depth of 300 mm if compacted layers occur.
4. Where possible, replace topsoil to a depth of 40 to 60 mm on lands where the slope exceeds 4(H):1(V) and to at least 75 mm on lower gradients.

REPLACING TOPSOIL

SD 4-2

(l) Apply topsoil to a depth of:

(i) about 40 to 60 mm on lands where the slope exceeds 4(H):1(V);[6] and

(ii) at least 75 mm on sites where the slope is less than 4(H):1(V).

(m) On completion of the respreading process, leave disturbed lands with a scarified surface[7] to inhibit soil erosion, encourage water infiltration and help with keying topsoil later (figure 4.3).

(n) Respread mulched vegetative material to provide soil stability on bare areas and particularly on those areas where landscape tree planting or bushland is to be established after works are complete.

(o) Select plant species that are consistent with the existing soil conditions at the site. Where practical, ensure the plants are consistent with any indigenous vegetation.

(p) Follow the stabilisation recommendations in Chapter 7.

Figure 4.3(a)
A track-walked slope
(see footnote 4)

6. Topsoil creep/slump is likely with greater topsoil depths, especially where keying is not satisfactory.
7. The practice (especially on batters) of leaving surfaces in a glazed condition with hard, smooth surfaces is not acceptable for several reasons, e.g. topsoils can slump, infiltration can be retarded, etc.

Figure 4.3(b) A track-walked slope (see footnote 4)

Figure 4.4 Phasing of rehabilitation is clearly evident on this batter

Figure 4.5 Recently rehabilitated lands at an urban subdivision near Sydney. Note the barrier mesh and sediment fencing still in position.

4.4 Special Considerations for *SWMPs*

4.4.1 Assessment of Erosion Hazard

(a) A simple procedure is provided to identify those sites of low erosion hazard, where the normal suite of erosion control measures, defined in earlier sections of this Chapter, is considered adequate.

(b) The potential erosion hazard associated with a specific site can be simply determined from figure 4.6, based on:

- the R-factor (rainfall erosivity) that relates to your site location, determined from the maps provided in Appendix B; and
- the typical upper slope gradient (measured in percent) of the site landform.

(i) Sites below the A-line on figure 4.6 have low potential erosion hazards and the standard erosion control measures defined in earlier sections of this Chapter are considered adequate. Planners of such sites need not undertake the tasks outlined in the remainder of Section 4.4[8].

(ii) Sites above the A-line have high potential erosion hazards and designers should apply the guidelines in Section 4.4.2, below.

8. Figure 4.6 has been derived assuming a typical maximum K-factor of 0.05, slope length of 80 metres, P-factor of 1.3 and C-factor of 1.0.

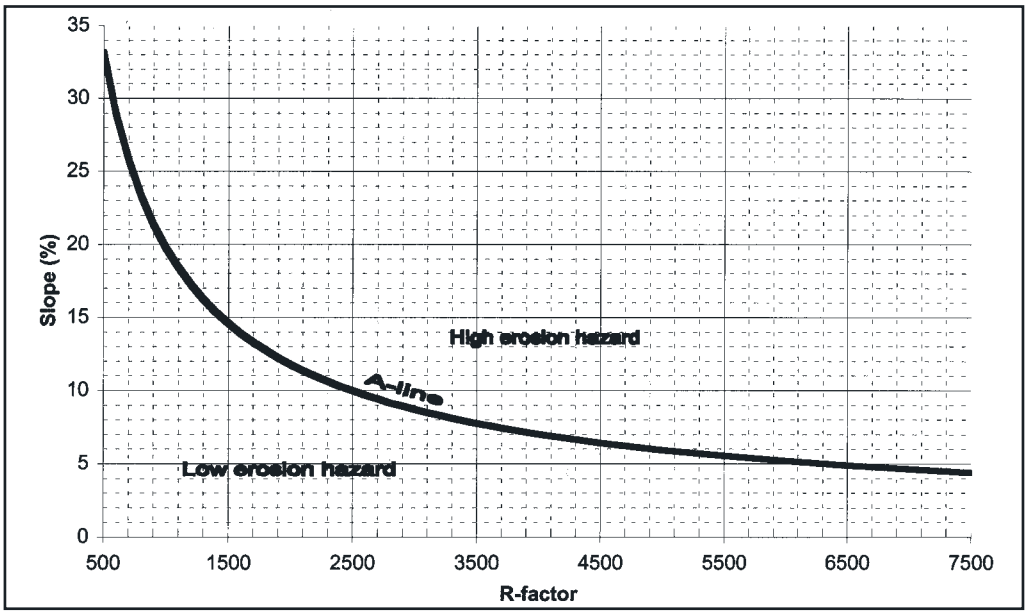


Figure 4.6 Assessment of potential erosion hazard

4.4.2 Management of Sites of High Erosion Hazard

Important Note: If you are not thoroughly familiar with the information on the Revised Universal Soil Loss Equation (RUSLE) presented at Appendix A, read it now.

(a) On constructed slopes ensure that slope length[9] and gradient relationships do not exceed those shown in figures 4.7 and 4.8.[10] Note that rehabilitating steeper slopes (>2.5(H):1(V)) by vegetative means can be difficult, especially where the soils are highly permeable, irrigation is not available and on sites with northerly or westerly aspects. The problem is greatest in the parts of New South Wales that are prone to extended periods where evaporation exceeds rainfall (i.e. nearly all areas except the North Coast and Snowy Mountains regions).

(b) Calculate the erosion hazard on all lands to be disturbed according to the Soil Loss Class (Table 4.2).[11] These classes should be based on local R, K and LS-factors with 80 metre slopes. Typical of most construction areas, also assume P-factors of

9. Here, slope length includes any batters and all upslope lands to a subcatchment boundary, either natural (e.g. crests) or built (e.g. roads or catch drains).
10. The graphs in figures 4.7 and 4.8 are based on LS = 750/1.3(R x K).
11. The Soil Loss Class has been used traditionally to compare apples with apples in relation to soil erosion hazard. Increasing the R-factor in the calculation of the Soil Loss Class by, say, factors of 1.4 and 2.3 where the receiving waters are highly or extremely sensitive, respectively, might be desirable. Highly and extremely sensitive receiving waters might include those requiring significant or comprehensive protection in Healthy Rivers Commission (2002), or those mapped as Classes P and S in SPCC (1980). Any increases should be considerate of the R-factor AEP (Appendix A), where the 20 percent AEP is suggested for highly sensitive waters and the 5 percent AEP for extremely sensitive waters.

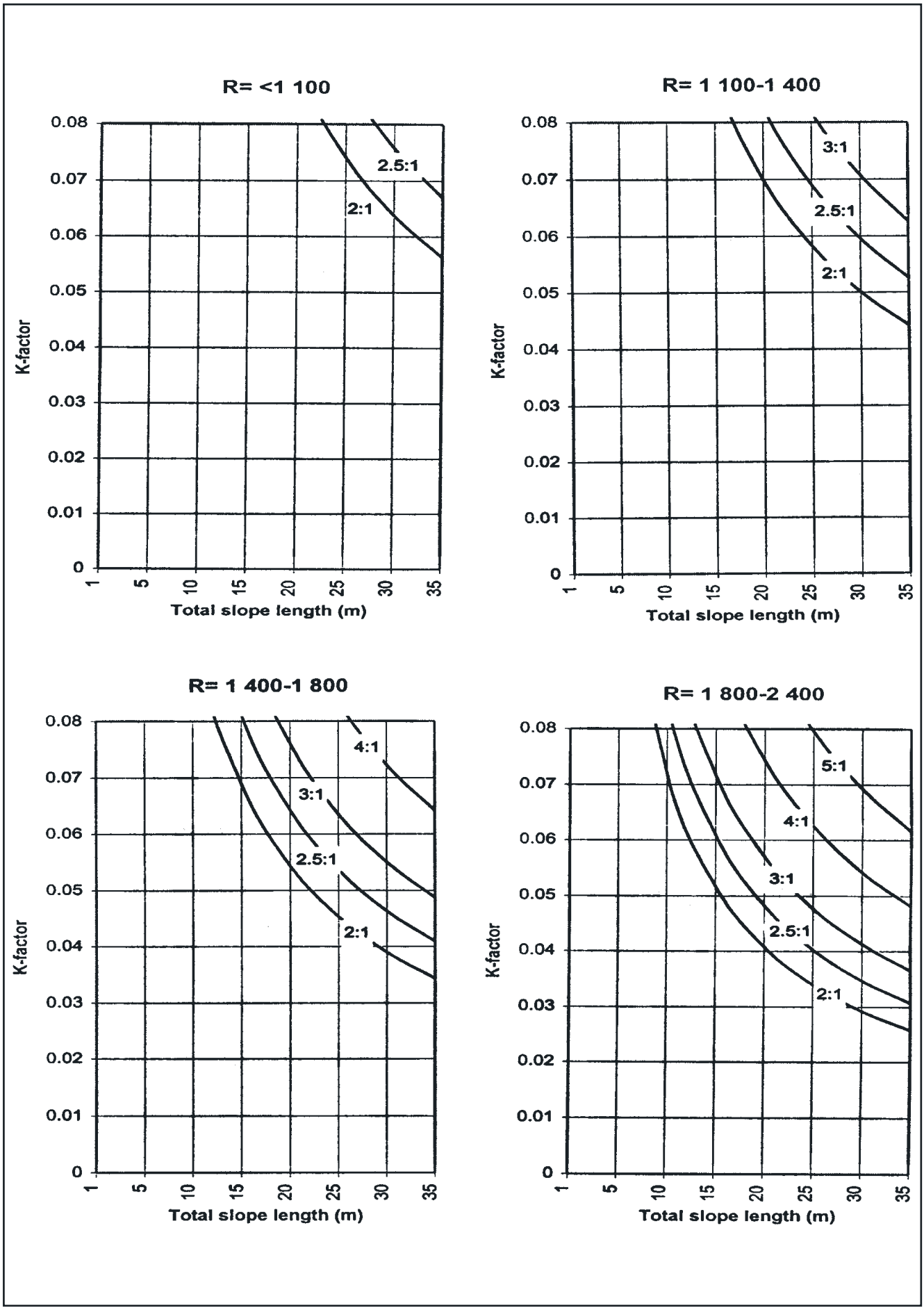


Figure 4.7 Maximum batter gradient (H:V) where the R-factor is 1,100, 1,400, 1,800 and 2,400 (adapted from Morse and Rosewell, 1993) (Appendix A)

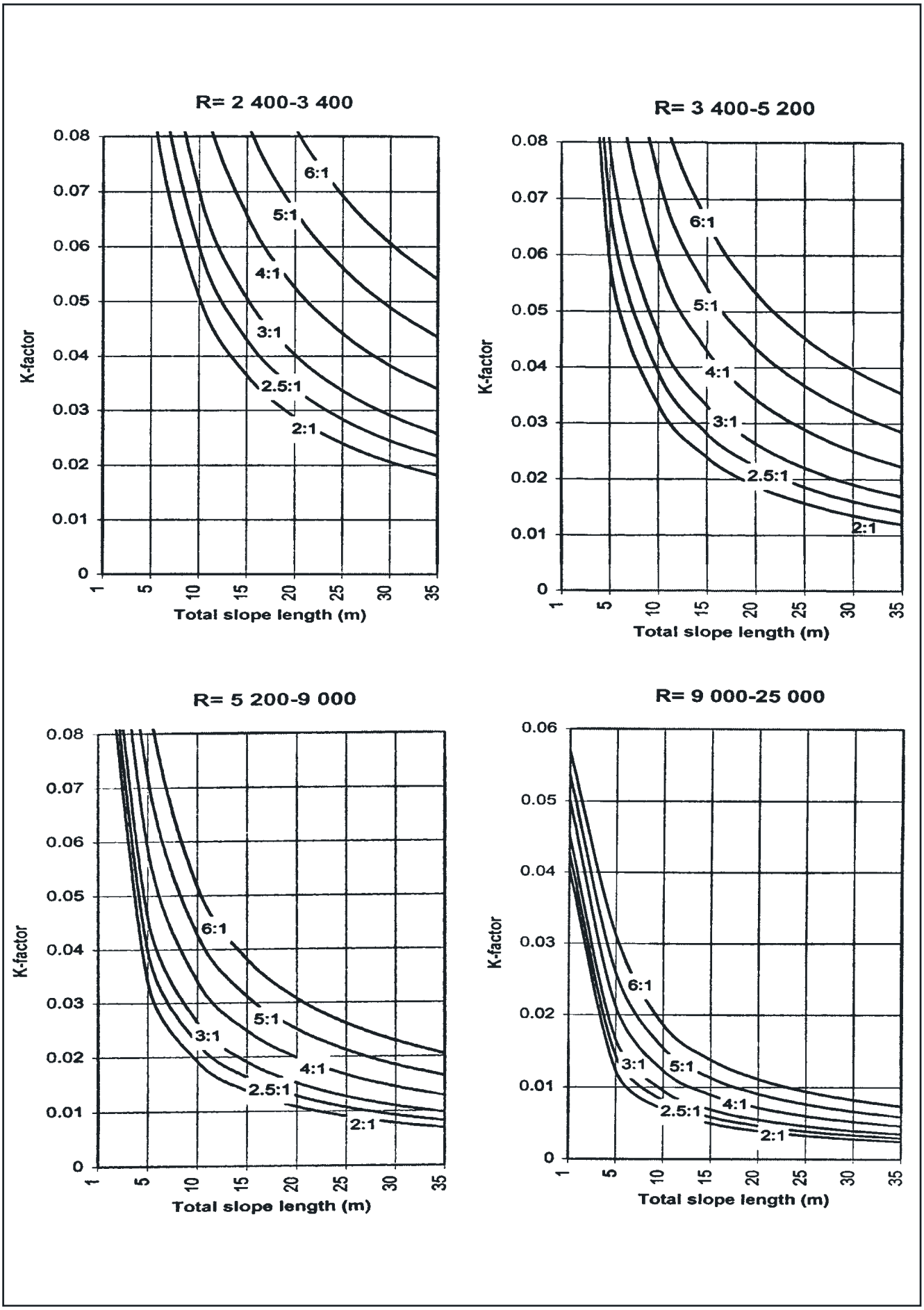


Figure 4.8 Maximum batter gradient (H:V) where the R-factor is 3,400, 5,200, 9,000 and 25,000 (adapted from Morse and Rosewell, 1993) (Appendix A)

Table 4.2 The Soil Loss Classes (adapted from Morse and Rosewell, 1996)

Soil Loss Class	Calculated soil loss (tonnes/ha/yr)	Erosion hazard
1	0 to 150	very low
2	151 to 225	low
3	226 to 350	low-moderate
4	351 to 500	moderate
5	501 to 750	high
6	751 to 1,500	very high
7	>1,500	extremely high

1.3 (i.e. the soils are hard and compact) and *C*-factors of 1.0 (i.e. no vegetative cover, probably being removed with a scraper). Planners can apply different slope lengths, P or *C*-factors if these are properly justified. Application of shorter slope lengths, for example, can put a site into a lower Soil Loss Class. However, the management of these variations should be clearly explained in any plans for erosion control (Chapter 2).

(c) Having identified the applicable Soil Loss Class, ideally schedule activities on highly sensitive lands to periods when rainfall erosivity is low. Highly sensitive lands occur:

(i) Always on Soil Loss Class 7 lands; and

(ii) At certain times of the year:

- on Soil Loss Classes 5 or 6 lands in all rainfall zones (figure 4.8)
- on Soil Loss Class 4 lands in Rainfall Zones 5 and 11.

Here, waterfront lands (Appendix I) should be regarded as Soil Loss Class 6 always.

Table 4.3 identifies those times of the year that do not contribute significantly to the rainfall erosivity (Appendix A) for different rainfall zones (figure 4.9). It shows those lands where land disturbance activities can be undertaken only with the application of special measures (marked "yes") and those where special measures are not

required (marked "no"). Of course, this assumes that the regular suite of BMPs is installed as outlined elsewhere in these guidelines).[12]

(d) Where scheduling activities on highly sensitive lands to periods when rainfall erosivity is low is not possible or is impractical, ideally ensure that any disturbed lands have *C*-factors higher than 0.1 only when the 3-day forecast suggests that rain is unlikely. In this case, management regimes should be established that facilitate stabilisation within 24 hours should the forecast prove incorrect.[13]

(e) The kinds of other special erosion control measures that might be invoked in any erosion control plans are usually site specific and beyond the scope of these guidelines.

12. Efforts should be made to keep the calculated soil loss less than 50 tonnes per hectare in any one half month, i.e. the product of percentage average annual *EI* for any particular half month (Rosewell and Turner, 1992) and calculated average annual soil loss should be less than 50 tonnes. So, Table 4.4 shows that:
    - Special measures are required on Soil Loss Class 3 lands when more than 14 percent of the average annual *EI* normally occurs in a half month
    - Special measures are required on Soil Loss Class 4 lands when more than 10 percent of the average annual *EI* normally occurs in a half month
    - Special measures are required on Soil Loss Class 5 lands when more than 6 percent of the average annual *EI* normally occurs in a half month
    - Special measures are required on Soil Loss Class 6 lands when more than 3 percent of the average annual *EI* normally occurs in a half month
    - Special measures are always required on Soil Loss Class 7 lands.
13. *C*-factors of 0.1 can be achieved in various ways as shown at Appendix A, note especially figure A5, Table A3 and Table A4. For example, figure A5 shows that a *C*-factor of 0.1 can be achieved with a 60 percent grass cover where, previously, the soils were stripped or deeply cultivated; alternately, Table A3 shows it can be achieved temporarily by application of a hydraulic soil stabiliser.

Table 4.3 Lands where special erosion control measures apply

Zone	Soil Loss Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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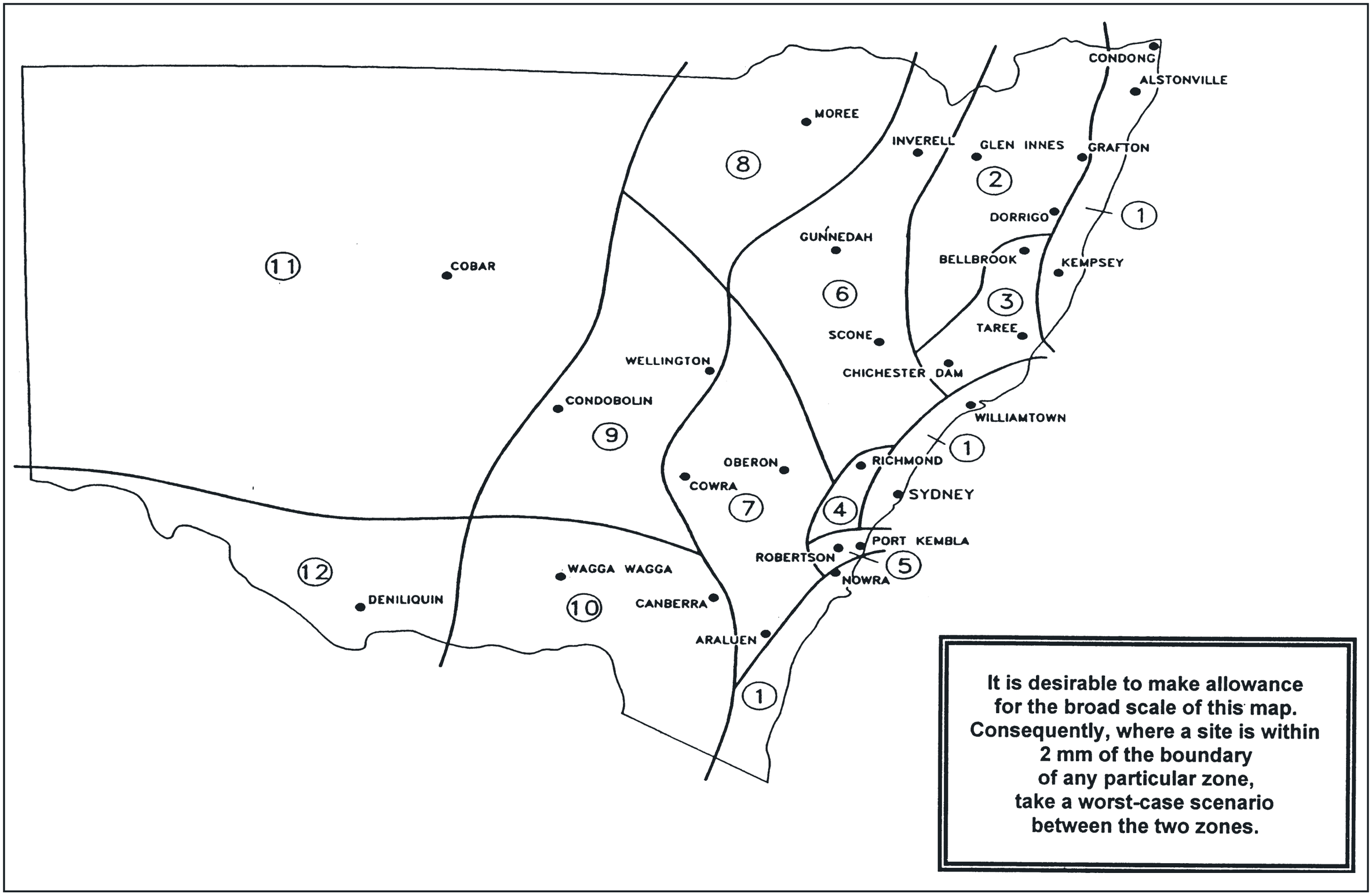


Figure 4.9 Rainfall distribution zones in New South Wales (Rosewell and Turner, 1992)

Chapter 5

EROSION CONTROL: MANAGEMENT OF WATER

5. Erosion Control: Management of Water

This chapter discusses erosion control through management of surface water flows. Being the pre-eminent consideration, works in and within core riparian zone are discussed first. Then, issues relating to sheet water flows and concentrated water flows outside the trunk drainage are addressed.

5.1 Introduction

(a) This chapter considers the selection, design and operation of water control structures that might be built during a development or land disturbance stage, including permanent drainage systems. Additional aspects are found in other texts (Chapter 10), including:

- *Managing Urban Stormwater: Council Handbook* (DEC, *in prep.*)
- *Managing Urban Stormwater: Treatment Techniques* (DEC – 2nd edition, *in prep.*)
- *Managing Urban Stormwater: Urban Design* (DEC, *in prep.*)
- *Constructed Wetlands Manual* (DLWC, 1988)
- *Australian Rainfall and Runoff* (AR&R) (Pilgrim, 1998)
- *Australian Rainfall Quality (draft)* (IEA, 2003).

(b) The process of land development often results in substantial modification to both the hydrological and topographical characteristics of a catchment. Note that:

(i) The hydrological characteristics usually undergo most change and result from:

- an increase in impervious surfaces, e.g., roofs and paved areas
- concentration of water through artificial drainage works
- alteration to the natural drainage pattern; and

(ii) The effect of these hydrological changes varies, but unless suitable control measures are in place, usually results in:

- a reduction in time of concentration
- a reduction in the duration of floods
- an increase in erosion hazards
- a considerable increase in the magnitude and frequency of peak flows.

(c) Erosion hazards and consequent risks of sediment pollution usually reach their highest levels during the land disturbance phase and the effects of soil and water management on disturbed sites are critical.

(d) Naturally, all works must comply with the various Acts (Appendix K), including:

- Water Act, 1912
- Soil Conservation Act, 1938
- Rivers and Foreshores Improvement Act (1948) (note Part 3A)
- Dam Safety Act, 1978
- Fisheries Management Act, 1994
- Protection of the Environment Operations Act, 1997
- Water Management Act, 2000.

5.2 Classification of Waterbodies Based on Objectives for Riparian Land

Riparian lands form the transition between terrestrial and aquatic environments.[1] As riparian environments are very diverse, defining a standard width for riparian lands is difficult. Nevertheless, three broad categories for riparian land are identified by the Department of Infrastructure, Planning and Natural Resources to reflect the relative importance of watercourses. Different management regimes apply to each of these categories (Table 5.1):

(a) Category 1 – environmental corridor[2]

Maximise the protection of terrestrial and aquatic habitats to:

- provide a continuous corridor for the movement of flora and fauna
- provide extensive habitats (and connectivity between habitat nodes) for terrestrial and aquatic fauna
- maintain the viability of native riparian vegetation
- manage edge effects at the riparian/urban interface
- provide bank stability
- protect water quality.

This is achieved by:

(i) where applicable, providing a continuous riparian corridor that links stands of remnant vegetation;

(ii) providing a "core riparian zone" (CRZ) with a minimum width of 40 metre from the top of the bank;

(iii) providing sufficient (additional) riparian corridor width based on geomorphological and environmental considerations;

(iv) providing a suitable environmental protection zoning to the riparian land that recognises its environmental significance;

(v) as far as practicable, restoring/rehabilitating the riparian zone by returning the vegetation, geomorphic structure, hydrology and water quality to the original (pre European) condition;

(vi) ensuring vegetation in the CRZ is at a density that would occur naturally (but see Section 5.3);

1. Riparian lands are those lands immediately next to and along or around waterbodies. They act as buffers and/or filters between the waterbodies and lands nearby. Also, they:
   – help with maintenance or improvement of water quality through stabilising banks
   – are important wildlife corridors that maintain biodiversity
   – improve aesthetic values, e.g. open space and the visual break up of lands.
2. Also note the importance of corridor connections between adjoining watercourses.

Table 5.1 Summary of Riparian Management Objectives

Minimum environmental objectives for riparian land	Category 1: Environmental corridor	Category 2: Terrestrial and aquatic habitat	Category 3: Bank stability and water quality
Delineate riparian zone on a map and zone appropriately for environmental protection	Yes	Yes	Not required
Provide a minimum core riparian zone width	40m from top of bank	20m from top of bank	No minimum – pipes last resort
Provide additional width to counter edge effects on the urban interface	10m	10m	Generally not required
Provide continuity for movement of terrestrial and aquatic habitat	Yes (including piered crossings)	Yes	Where appropriate
Rehabilitate/reestablish local provenance native vegetation	Yes	Yes	Where appropriate
Locate services outside the core riparian zone wherever possible	Yes	Yes	
Locate playing fields and recreational activities outside core riparian zone	Yes	Yes	
Treat stormwater runoff before discharge into riparian zone or the watercourse	Yes	Yes	Yes

(vii) placing services (power, water, sewerage, and water quality treatment ponds) outside the CRZ. Encroachment into the non core riparian area may be possible if the impact on riparian functions is minimal and integrity is maintained;

(viii) providing a suitable interface between the riparian area and urban development (roads, playing fields, open space) to minimise edge effects;

(ix) minimising the number of road crossings;

(x) maintain riparian connectivity by using peered crossings in preference to pipes or culverts

(xi) minimise the impact of walkways, cycleways and general access points by using ecologically informed design principles;

(xii) locating flood compatible activities (playing fields) outside the CRZ. (Encroachment into the riparian area may be possible if the impact on riparian functions is minimal and integrity maintained); and

(xiii) treating stormwater runoff before discharge into the riparian zone of the watercourse.

(b) Category 2 – Terrestrial and Aquatic Habitat

Maintain/restore as much as possible the natural functions of a stream to:

- maintain the viability of native riparian vegetation
- provide suitable habitat for terrestrial and aquatic fauna
- provide bank stability
- protect water quality.

This is achieved by:

(i) providing a CRZ with a minimum width of 20 metre from the top of the bank;

(ii) wherever possible, providing sufficient (additional) riparian corridor width based on geomorphological and environmental considerations;

(iii) as far as practicable, restoring/rehabilitating the riparian zone by returning the vegetation, geomorphic structure, hydrology and water quality of the original (pre European) condition;

(iv) ensuring vegetation in the CRZ is at a density that would occur naturally (but see Section 5.3);

(v) whenever possible, providing appropriate zoning that recognizes the environmental significance of the riparian land;

(vi) minimising the number of road crossings;

(vii) ensuring that road crossings are designed to maintain riparian connectivity;

(viii) providing a suitable interface between the riparian area and urban development (roads, playing fields, open space) to minimise edge affects;

(ix) minimising the extent of open parkland beside a stream;

(x) locating services (power, water, and sewerage water quality treatment ponds) outside the CRZ. Encroachment into the riparian area may be possible if the impact on riparian functions is minimised; and

(xi) treating stormwater runoff before discharge into the riparian zone or the watercourse.

(c) Category 3 – Bank Stability and Water Quality

Minimise sedimentation and nutrient transfer to:

- provide bank stability
- protect water quality
- protect native vegetation.

This is achieved by:

(i) where possible, emulating a naturally functioning stream;

(ii) where possible, providing opportunity for vegetated habitat refuges (terrestrial and aquatic);

(iii) using pipes or other engineering devices as a last resort; and

(iv) treating stormwater runoff before discharge into the riparian zone or the watercourse.

5.3 Works Within the CRZ

5.3.1 Introduction

(a) Works within the CRZ should maximise the retention of any existing native vegetation and minimise site disturbance.

(b) Where practical, ensure that constructed grassed batters have gradients no steeper than 6(H):1(V) if below the 2-year ARI flood level and following the recommendations in figures 4.3 and 4.4. Waterways and spillways should be designed following Section 5.4.

(c) Generally, the design for works in or near waterbodies should ensure the retention and enhancement of their natural functions and maintenance of fish passage. Design of permanent works should consider the following nine principles:

(i) *Interdependence* – all catchments should be considered as single functioning units with interchange between aquatic and riparian ecosystems, floodplains and tributaries;

(ii) *Individuality* – drainage designs should recognise that each catchment has individual characteristics with unique qualities;

(iii) *Continuity* – the linear nature of many ecosystems near waterbodies should be

maintained as continuous corridors that allow living organisms to move and spread;

(iv) *Variety* – maintain the existing habitat variety (including any living and dead vegetation, and the litter layer, soil and landform) to ensure continued biodiversity;

(v) *Retention of existing habitats* – existing habitats should be retained because the original habitat cannot be redeveloped in the short term;

(vi) *Protection of potential habitat links* – degraded section of linear habitat systems should not be further degraded and, where possible, should be rehabilitated;

(vii) *Adding resilience* – where possible, existing or potential linkages between waterbody systems and habitat areas or sinks (e.g. parks, reserves, forests, etc.) distant from the waterbody should be protected and/or rehabilitated;

(viii) *Use of natural materials* – designs should incorporate indigenous vegetation propagated from seed collected from the local area and natural materials. Hard engineering designs should be applied only in exceptional circumstances; and

(ix) *Multi-disciplined approach* – the design approach should seek input from different professional disciplines to cover a wide range of multi-objective approaches.

(d) To protect and enhance various vegetation and ecological properties:

(i) Retain natural wetlands;

(ii) Where vegetation must be disturbed:

- first, assess the natural habitat and species to help design a reformed environment containing most of the features of a natural ecosystem
- avoid clearing aquatic and semi-aquatic plants
- investigate and incorporate suitable planting techniques for rehabilitation
- do not use invasive species in rehabilitation (e.g. kikuyu)
- include a broad range of endemic vegetation types (aquatic grasses, other groundcovers, shrubs and trees) in the species mix for permanent revegetation
- do not use herbicides where they might pollute the waterbodies; and

(iii) Overall design should include:

- a vegetated "core riparian zone" on the banks or shore according to the category of riparian land (see Section 5.2) or to the flood limit, whichever is greatest
- a diverse and stable environment in and near the waterbody
- an outer buffer zone of grass or appropriate pollution interception strategy (WSUD system, constructed wetland, or other approved system) to protect the waterbody and its riparian zone.

(e) When designing individual catchment configurations:

(i) Retain naturally functioning streams and, if necessary, engineer drainage lines to reflect natural functions, including the maintenance of fish passage;

(ii) Avoid the aggregation of several subcatchments to a common discharge point; and

(iii) Clearly define maintenance requirements before design starts to reduce needs/costs associated with clearing and mowing.

(f) Hay bales should never be used for sediment control where seed from them can wash into waterways or foreshore areas promoting weed growth. Straw bales consisting of crop stubble do not contain seed and do not have this problem. Both straw and hay bales are less durable than many other sediment control products, often considerably so.[3]

(g) Where works are to be undertaken within the 2-year flood level, measures should be incorporated that ensure the *C*-factors are always below 0.05 during possible erosion events. Further, measures to reduce the *C*-factors to this level should remain stable under concentrated water flow conditions where appropriate. Above all, works should not result in or be likely to cause sediment pollution, either directly or indirectly.[4]

(h) Critical aspects of in-stream works should be scheduled for forecasted dry weather periods.

(i) Where works occur in or close to watercourses, the Site Supervisor or someone nominated by him/her, should record in a notebook each day:

- the *C*-factor status at various positions along the watercourse
- publicised weather forecasts.

5.3.2 Protection of Riparian/foreshore/intertidal Areas

(a) Riparian/foreshore/intertidal areas support unique and delicate ecosystems and works here should be undertaken with the least impact possible. A special problem here is caused by unpredictable flood events or high tides that can wash equipment and materials away, polluting waters and, in some instances, causing navigational hazards. The following general management measures should be applied:

(i) Minimise land disturbance activities to those absolutely necessary to complete the works;

(ii) During construction activities, stockpile or store materials away from the 40-metre zone, where practical, and certainly outside the intertidal area;

(iii) Ensure that no damage occurs to watercourse or intertidal rocks and the organisms that live on them by equipment, machinery or any other activity;

3. Foreshore lands are between the high and low watermarks.
4. Works should be undertaken, preferably, in the period when the rainfall erosion index (*EI*) is likely to be low and lands in Soil Loss Classes 5, 6 and 7 can be disturbed (Table 4.2).

(iv) Note and avoid any areas of seagrasses or kelp; and

(v) Store suitable spill control materials in easily accessible locations at all times during construction works.

(b) Generally, the philosophies and techniques for erosion and sediment control on foreshore lands are similar to those applied to any site where erosion can occur (Section 5.3). However, where works are being undertaken close to waterways or intertidal zones, management measures should be designed to adapt to different influences.

(c) Wherever possible, erosion and sediment control measures should be located above high tide marks and the 2-year ARI flood to prevent impacts from concentrated water flows, or tidal or wave action.

(d) Barges are commonly used to get to waterfront sites during construction because of limited landward access. Management measures that relate to use of barges in the foreshore environment for construction purposes include:

(i) Only use barges where, in the context of the overall development, they offer the best environmental outcome;

(ii) In shallow water, only use self-propelled barges at suitably high tides where adequate clearances are available to prevent disturbances to seabeds and prevent damage to subtidal and intertidal rocks, kelp or seagrasses;

(iii) Where barges might collide with seawalls due to wave and wash conditions, use protective measures such as fenders or rubber tyres to prevent damages to the seawall.

(iv) Do not use screw piles in waters where a potential occurs to encounter rock;

(v) Floating sediment curtains should be deployed while materials and/or equipment are being transferred on and off barges to provide secondary containment for any spills; and

(vi) Materials being transported on and off barges must be adequately secured.

5.3.3 Works in Watercourses

(a) Apply the following general hydrological design guidelines:

(i) Maintain the "natural" channel and floodplain form. If a watercourse has been modified already, any channel works proposed should be based on designs that resemble the natural forms of that channel. In modified systems, the advice of a suitably qualified and experienced fluvial geomorphologist should be sought. In some cases, a natural system in a similar catchment nearby can be used as a guide for channel design.

(ii) In emulating the natural form, watercourse design should include floodplains,

terraces and other features typical of the natural systems;

(iii) Where possible, runoff characteristics associated with high runoff coefficient land uses should be modified to as near to the natural condition as practicable before entering a watercourse. The aim is to try to mimic the predevelopment flow regimes.

(iv) Detention basins/wetland systems:
- should be designed to handle any increased runoff associated with the development so that no impact on watercourses occurs
- should be built away from:
  - watercourses
  - natural wetlands
  - where possible, remnant natural vegetation;

(v) Drainage discharge points (outlet pipes and spillways) should follow the requirements of Section 5.3.5, below.

(b) Apply the following geomorphic design guidelines to streams:

(i) Construction and maintenance activities should to be designed to avoid erosion of waterways through removal of vegetation or sediment from beds or banks;

(ii) Channel form, shape and cross-section at different sections of the river should mimic the natural stable conditions – channel dimensions should not be enlarged to cater for bigger flood events;

(iii) Design should be based on simulated stream hydrology to allow design of in-stream features, such as pool-riffle sequences, and not just peak flows;[5]

(iv) Watercourses should include characteristics typical of natural watercourses in the area. These might or might not include meanders, wet, low flow channels with pools and riffles, or bars and benches;

(v) The dimensions of watercourse cross-sections and in-stream features can be determined from the existing stream, if it is still present. Where it is not present, the nearest similar stream should be used as a guide;

(vi) Include pools and riffles (figure 5.1), where the length of reaches should be five to seven times the observed bank full width. Pool areas might need to be excavated with the removed sediment being used to build up the bank around the outside of a bend. Riffle areas can be restored with gravel or rock placed within the channel between the pools. The appropriate type of rock or gravel and its placement can be determined by viewing similar riffles upstream and

5. Riffles are shallow areas between pools. They are important for fish passage and aeration due to hydraulic jump (figure 5.1). Usually, pools are within the curves of meander bends while riffles are within straighter sections, but they can simply be depressions in streams. Mostly, pools have fine-grained sediment beds while riffles have rocky or gravely beds. Generally, pool-riffle pairs occur every five to seven channel widths along a stream channel.

Figure 5.1 Pool and riffle zone sequence

downstream, or in similar nearby intact meandering systems. Adjustments might need to be undertaken to the structural works after flood events. Note that meandering channels are never permanently stable and their shape will change in time;

(vii) In relation to riffle zones:

- calculate tractive forces for conditions to determine the minimum rock size for riffles where:
  - the average channel slope and bank full depths occur throughout the reach
  - critical flows are assumed to occur on riffle faces at 20(H):1(V) slopes
- ensure slopes do not exceed the 20(H):1(V) gradient
- ensure crests follow the average slope of the stream reach[6]
- ensure the largest boulders are placed on the channel bottom at the crest of the riffle while the smallest boulders are set aside until the downstream slope is nearly complete; and

6. Riffle crests are elevated pools that extend upstream to the midpoint of the upstream riffle slope. They form stilling basins that improve fish passage and reduce scour.

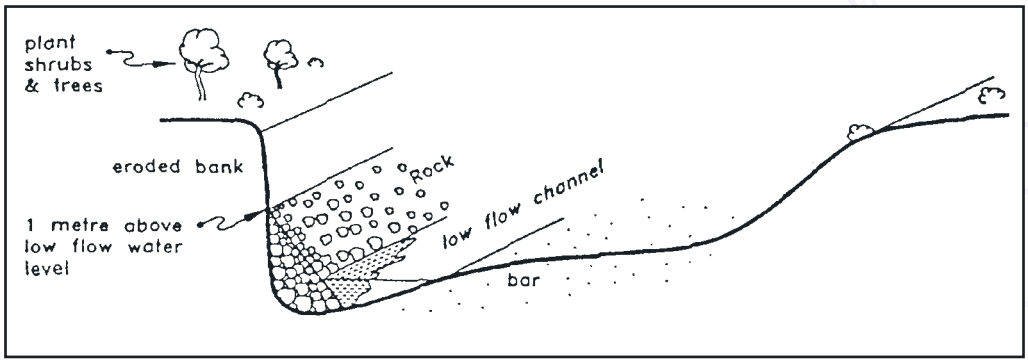


Figure 5.2 Use of rock to stabilise a stream bank (DLWC, 1994)

(viii) The average radius of the curvature of meander bends should be 2.4 times the bank full width.

(c) *Revetment and Vegetation.* Various techniques are available to help stabilise stream-banks. This one, which involves placing rock that cannot be washed away against the base of the bank to hold it in place (figure 5.2), must be designed by an appropriately skilled person. The rock needs to be hard, angular in shape, resistant to weathering and water action, and free from soil and vegetation. The practice is suitable for most situations except very narrow streams where the rock could block a large part of the channel. The procedure for implementing this technique is:

(i) Place the rock directly on the site, taking care to ensure that the range of sizes remains well mixed. If the eroded bank is high, form an access track to get to the base of the bank;

(ii) At 1-metre centres, plant:
- shrubs behind the wall and along the upper part and top of the bank
- trees along the top of the bank starting at a distance back from the bank equal to three times the bank height.

Establish groundcover over all areas at densities of four plants per square metre. Water all plants until they are established.

(d) *Planting the Common Reed, Phragmites australis.* With this technique, a dense growth of Phragmites australis is established along the bank. The reeds slow the flow and trap sediment, minimising scour and undercutting of the bank, while providing improved riparian and aquatic habitats. Groynes might be necessary if active erosion is already occurring. The technique is suitable for most situations where grazing

control can be provided. However, it should not be used for very narrow streams (where flow might be obstructed) or where streams are perched above the floodplain and a breakout and course change is possible. *Phragmites australis* is effective because of its ability to grow in 1 to 2 metres of water and up steep banks above normal water level to provide bank protection against variable water levels. This technique is excellent for water quality improvement in tributaries and to build up the floor of gullies. The procedure for implementing this technique is:

(i) If necessary, construct groynes to provide bank stability;

(ii) Collect reeds for planting, either by transplanting them from an existing stand, harvesting seed and growing seedlings, or by taking cuttings in early spring. Plants might be available commercially;

(iii) Planting position and time depends on the bank shape and stream hydrology. Plant where and when moisture is consistent, without long periods of inundation of greater than 300 mm until the seedlings are established (generally one year). Plant at spaces of 300 to 500 mm if sufficient material is available, or in clumps. If bank shape allows, plant several rows; and

(iv) Use slow release fertiliser tablets in planting holes if the nutrient levels of the soils are low.

(e) *Bendway Weirs*. These should be designed by an appropriately experienced person. They are low level, upstream angled, stone sills attached to the outer banks of bends in smaller rivers or watercourses (Derrick, 1996). Typically, the weirs are:

- angled 10 to 25 degrees upstream (into the flow)
- built of well-graded stones with an upper weight limit of 300 to 450 kilograms;
- built in sets spaced 20 to 30 metres apart
- built 0.6 metres high at the stream end, rising to 1.2 metres at the bank end and keyed into the bank with lengths varying from one-quarter to one-half the width of the river at base flow.

They redirect water flowing over the weir at an angle perpendicular to the axis of the weir and break up the stream's strong secondary currents in bends. Consequently, flow is directed away from the outer bank of the bend towards the point bar reducing near bank velocities and erosion. Other benefits include improved aquatic habitats with the overall increase in stream depths, stable scour holes and velocity redistribution (even during low flow). In addition, pool-riffle regimes can be reestablished and any existing vegetation can be stabilised.

(f) *Reconstructing Vegetated Meander Bends in Straightened Channels*. This technique is used to restore the natural meandering streambed pattern where these have been artificially straightened or have eroded into straight channels. Consequently, it requires the reconstruction of meander bends and pool and riffle sequences, the

shape and dimensions of which can be determined from aerial photographs, parish maps, portion plans, topographic maps, etc. Construction should begin upstream at the junction of the remaining intact meandering channel and the straight channel and continue downstream. Channel units that could need to be constructed include:

(i) The outside of curved banks of the meander bends. Some form of armouring should protect the toe of the bank until vegetation (grasses and shrubs planted with the structural works) becomes established. These works are placed outside the meander bends from just above the upstream point of inflection, around the bend, to just below the downstream point of inflection;

(ii) The inside of the bends (point bars). When flows start going around the new bends, point bars will naturally start to deposit on the insides of the bends; and

(iii) Pools and riffles.

5.3.4 Temporary Waterway Crossings

(a) Temporary waterway crossings are usually formed using culverts or pipes to carry flow under a raised gravel carriageway that allows vehicles to cross the stabilised waterway safely without causing damage and erosion.

(b) The following standard design criteria (Standard Drawing 5-1) should be followed:

(i) prohibit traffic until the access way is constructed;

(ii) Use a clean, rigid, non polluting aggregate or gravel (100 to 150 mm aggregate);

(iii) Support the gravel on needle-punched geotextile;

(iv) Have a minimum depth of 200 mm of gravel;

(v) Provide a 3-metre wide carriage way and sufficient length of culvert pipe to allow less than a 1(V):3(H) slope on side batters;

(vi) Provide a lower section to act as an emergency spillway in greater than the design storm events (Section 2.3.1 (e)); and

(vii) Ensure that culvert outlets extend beyond the toe of the fill embankments.

(c) The following maintenance issues should be noted:

(i) Keep the pipe culvert clear to avoid bypassing by storm flows less than the design storm event due to blockages from debris or sediment;

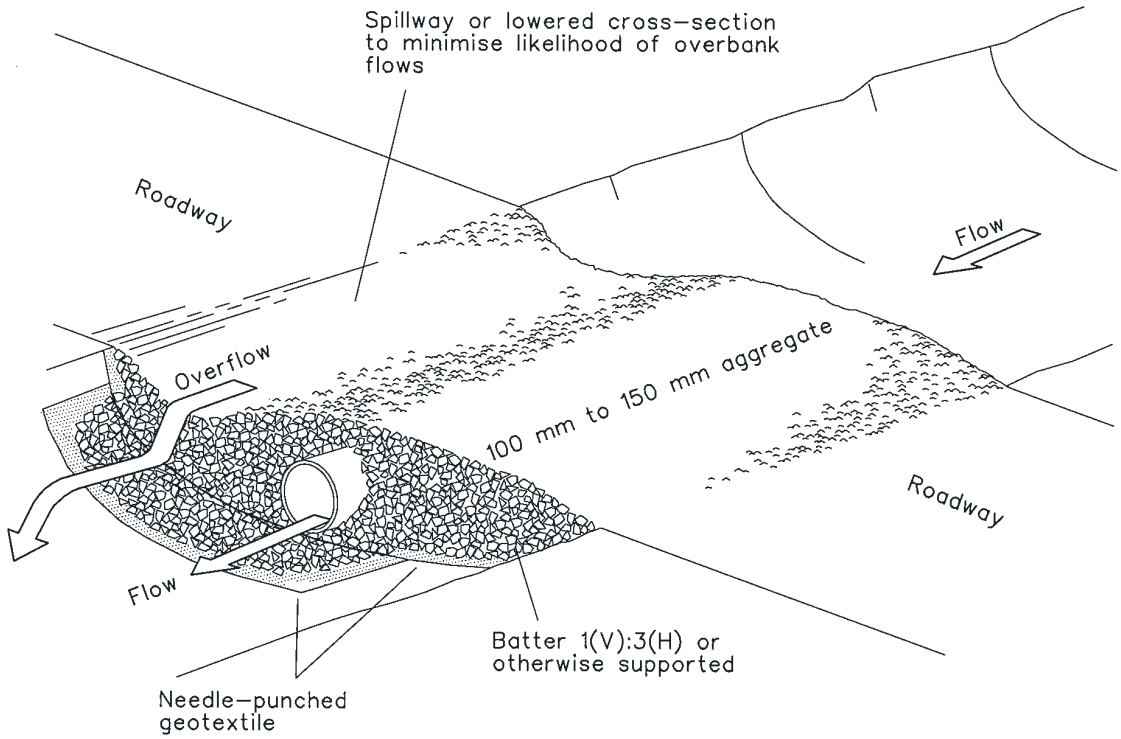
(ii) Recover gravel to maintain minimum depth of 200 mm;

(iii) Remove the crossing when it is no longer required; and

(iv) Rehabilitate the area following the vegetation management plan or other site rehabilitation plan.

(d) In addition, consideration should be given to the following limitations:

(i) Oils or other potentially hazardous materials should not be used as surface treatment;



Construction Notes

1. Prohibit all traffic until the access way is constructed.
2. Strip any topsoil and place a needle-punched textile over the base of the crossing.
3. Place clean, rigid, non polluting aggregate or gravel in the 100 mm to 150 mm size class over the fabric to a minimum depth of 200 mm.
4. Provide a 3-metre wide carriageway with sufficient length of culvert pipe to allow less than a 3(H): 1 (V) slope on side batters.
5. Install a lower section to act as an emergency spillway in greater than design storm events.
6. Ensure that culvert outlets extend beyond the toe of fill embankments.

TEMPORARY WATERWAY CROSSING SD 5-1

(ii) Upstream flooding problems need to be assessed;

(iii) Downstream flooding in times of overtopping needs to be assessed;

(iv) Activities that might affect water quality should be addressed.

(v) Also, see Section 5.2 regarding special requirements for working closer than 40 metres from waterways.

5.3.5 Construction of Culverts and Bridges

(a) When working in creeks or rivers, careful planning is required to limit the impact of sediment pollution occurring because of works.

(b) Where possible, divert water (by pipe or bank) around culverts and/or bridges during construction so that the entire system is stable at least up to the 2-year ARI storm event. The formation of temporary dams and draining or pumping of water around the site to control polluted waters should be undertaken with all care.

(c) Where culverts intercept table drain flows, construct culvert headwalls with sufficient height and width to ensure flows in the drains do not bypass or overtop the inlet headwall. Culvert outlets should normally extend beyond the toe of fill embankments. Further, outlets should be designed and constructed so that they align evenly with surrounding landforms and do not protrude. Where possible, all outlets to water-courses should be of a natural form, using riprap packed with soil and planted with sedges, rushes and grasses as scour protection. The use of concrete headwalls should be avoided.

(d) Care should be exercised in the construction of sediment basins (Section 6.3.3) on waterways below these works. While sediment control is important, sometimes the effect of disturbance of waterways for basin construction can cause more damage than can be gained by their presence. Innovative techniques are encouraged, such as using floating booms, turbidity curtains and similar devices. Sediment basins should not be constructed in line on a watercourse.

(e) See Section 5.2 regarding special requirements for working closer than 40 metres from waterways.

5.4 Regular Site Drainage Works

5.4.1 General Recommendations

(a) Install site drainage works to convey stormwater safely through and away from the site, particularly those affecting possible erosion of soil and subsequent pollution by sediment and trash. Preferably, prioritise drainage works with the most important control measures installed first.

(b) Where possible, divert run-on water from lands upslope around the site while land disturbance activities are going on. Note Section 5.4.3, below, in relation to concentrating flows and "soft" outlets.[7]

(c) Direct water across the site at non erodible velocities in the design storm event (Section 2.3.1 (e)).[8]

(d) Water management programs should favour:

  (i) division of the site into smaller, more manageable catchments;

  (ii) installation of simple structures constructed from local materials;[9]

  (iii) taking advantage of permanent stormwater facilities that can double as temporary soil or water control measures; and

  (iv) the use of porous zones (e.g. grassed waterways) within the limitations of (e), below, to help natural assimilation of water pollutants and reduce runoff.

(e) Works should not:

- adversely affect upstream or downstream properties
- cause new seepage areas through a rise in the watertable[10]
- eliminate existing seepage areas that affect remnant natural ecosystems
- increase the hazards of dryland salinity within the catchment.

5.4.2 Sheet Flows

(a) Sheet erosion is the removal of a relatively uniform layer of soil from the land surface by rain-splash and/or water runoff. The energy in rainfall is often sufficient to loosen exposed soil particles that can be subsequently transported by water. Where practicable, reduce the sheet erosion hazard by:

  (i) protecting the ground surface with a cover of suitable vegetation or an erosion control product – note the influence of the *C*-factor on the erosion hazard (Appendix A);

  (ii) reducing the volumes of water flows; and

  (iii) reducing the velocities of water flows.

(b) Reduce runoff volumes by leaving scarified soil surfaces (or similar) or installing

7. Do not divert stormwater onto nearby lands without obtaining earlier written approval from the affected landholder.
8. This guideline applies to both sheet flows and where water is concentrated by works, such as catch drains, waterways, drop structures, outlet structures, etc.
9. Soft local rock might not be suitable for permanent structures.
10. Often watertables in eastern Australia are saline. Where these watertables are raised into the root zone, most plant species will die and the erosion hazard rises substantially.

contour banks to keep slopes less than 80 metres in rainfall events – note the influence of the LS-factor on the erosion hazard (Appendix A).

(c) Protect the ground surface by encouraging infiltration of water through progressive revegetation of the site (Chapter 7), installing various erosion control products (Appendix D), cellular confinement systems, etc. Note that:

(i) Under certain conditions, rolled erosion control products (RECPs) can exceed the sheer stress rating of rock rip rap and can be less expensive (Lancaster, *et al.*, 1997). A further benefit of RECPs is that they allow vigorous vegetation growth, offering a "softer", more aesthetically pleasing appearance. However, proper installation of RECPs is critical for their success (Standard Drawing 5-2); and

(ii) Cellular confinement systems are available with or without perforated sides. Perforated sides are preferred because they allow drainage and reduce the hydrostatic loads in the cells (Standard Drawing 5-3).

(d) Reduce water velocities by:

(i) keeping gradients as low as possible (Section 4.4.2 (a);

(ii) ensuring a good ground cover that promotes infiltration; and

(iii) installing banks upslope to divert flows away from the site (Section 5.4.4) and reducing slope length.

5.4.3 Concentrated Flows

(a) Waters are concentrated in drains for interception/diversion of surface or subsurface flows and to convey these to stable outlets, for example:

(i) to intercept offsite run-on water;

(ii) to intercept spring water, especially in areas with moderate or high hazards of landslip;

(iii) to divert water from cut or fill slopes;

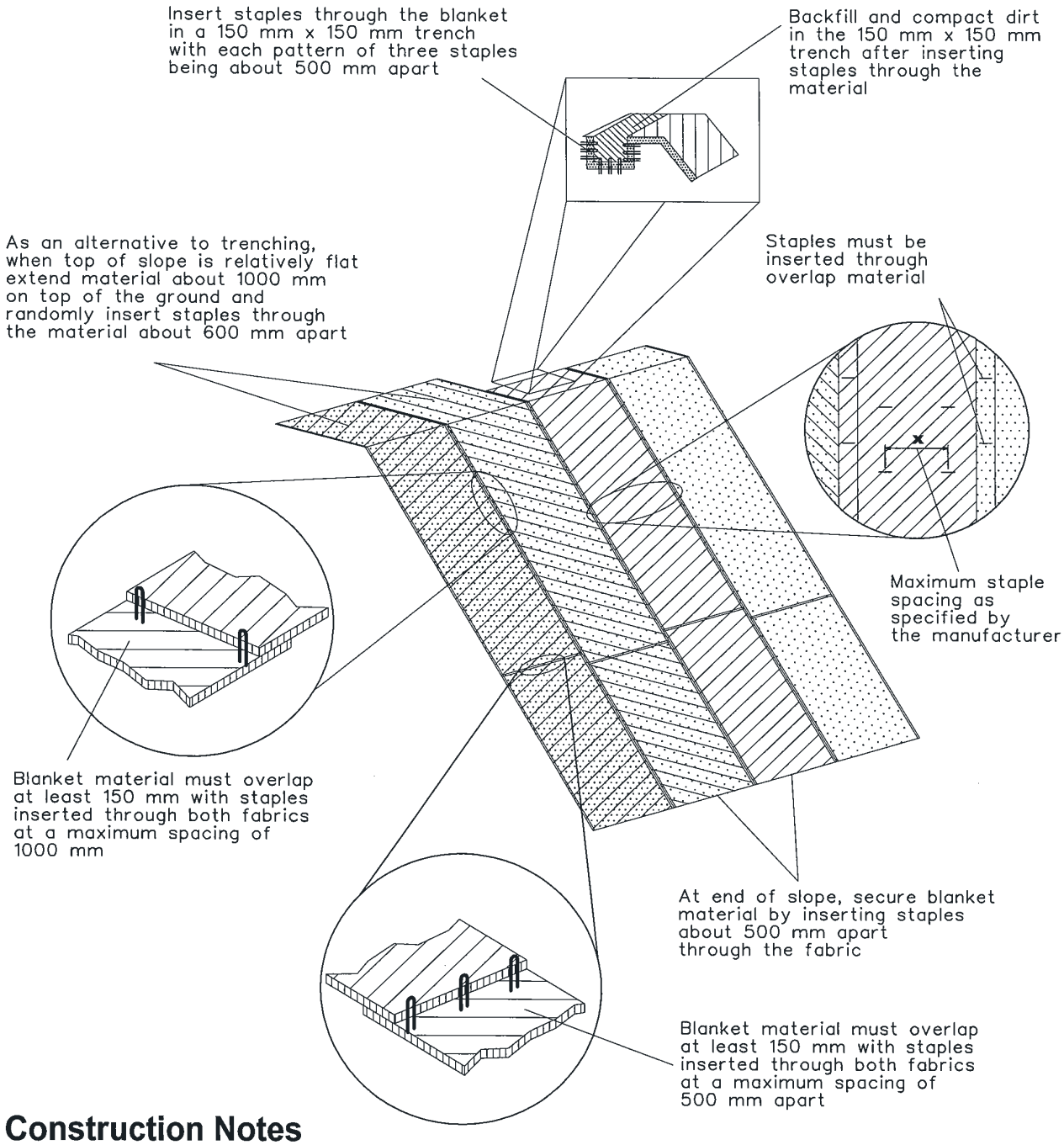
(iv) to shorten long lengths of slope, particularly on lands with high soil erosion hazards, such as earth batters, unpaved roads and newly seeded areas (Section 4.4.2 (a);

(v) to carry water down the face of a cut or fill slope; and

(vi) to provide the general stormwater conveyance system.

Choice of channel/drain type should depend on its purpose, materials available and cost.

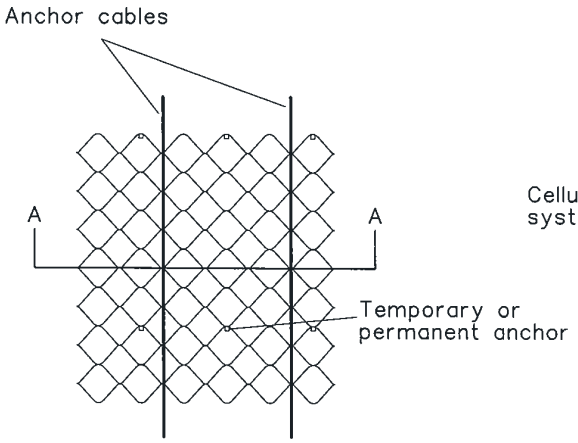
(b) Construct temporary channels/drains and their inlet and outlet works to convey water at least up to the design peak flow and remain stable, usually in the 10-year ARI time of concentration storm event. In some situations, designing it for flows from larger storm events might be necessary, e.g. to prevent damage of environmentally

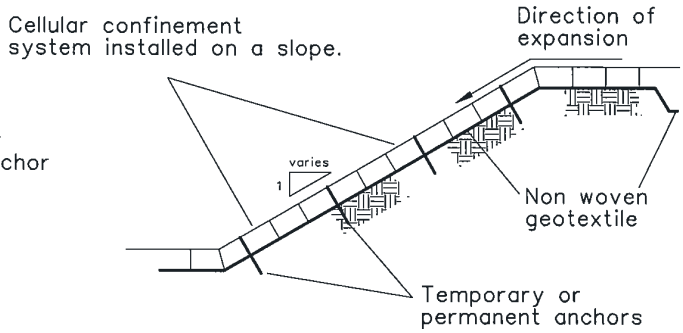


Construction Notes

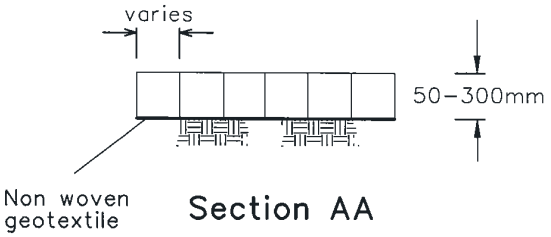
1. Remove any rocks, clods, sticks or grass from the ground surface before laying the matting.
2. Spread topsoil to at least 75 mm depth.
3. Where appropriate, complete fertilising and seeding on a properly prepared seedbed (Standard Drawing 7-1) before laying the matting.
4. Ensure the fabric can be continuously in contact with the soil by grading the surface carefully first.
5. Lay the matting in "shingle-fashion" with the ends of each upstream roll overlapping the next roll downslope.
6. Ensure sufficient staples are used to maintain a good contact between the soil and the matting.

RECP : SHEET FLOW — SD 5-2

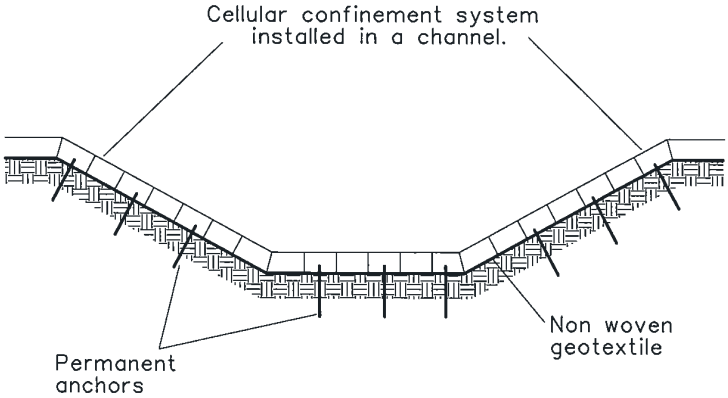




Slope Protection System



Section AA



Channel Protection System

Construction Notes

1. Undertake design only with the help of a suitably qualified geotechnical engineer.
2. Anchor systems on steep slopes to prevent sliding or movement under gravitational forces. This might include the use of high tensile, low creep cables made of polyester (not polypropylene), rope or steel wire.
3. Place thick, non woven geotextiles under the cellular confinement system to allow for lateral drainage.
4. Fill the cells with soil, rock or concrete depending on the application.

CELLULAR CONFINEMENT SYSTEMS SD 5-3

sensitive areas and/or where failure is likely to result in substantial loss of property or a danger to life.

(c) Also, design any permanent channels/drains and inlet and outlet works to convey water at least up to the design peak flow and remain stable, usually in the 10-year ARI time of concentration storm event. However, follow council's guideline where different to this.

(d) For all water conveyance structures, adopt the recommendations shown at Appendix F for calculation of peak flow runoff coefficients (C_{10}) where the lands are disturbed by removal of vegetation and topsoil (common on construction sites and mining sites). Where the lands are not so disturbed, apply the criteria shown in Pilgrim (1998).

(e) Reduce the erosive energy levels of concentrated water in constructed channels by:

- constructing channels/drains with a parabolic or trapezoidal cross-section (rather than V-shaped)
- widening the drain invert
- installing check dams (figure 5.3 and Standard Drawing 5-4)
- installing appropriate channel linings (Section 5.4.4 (d))
- installing energy dissipaters at outlets.

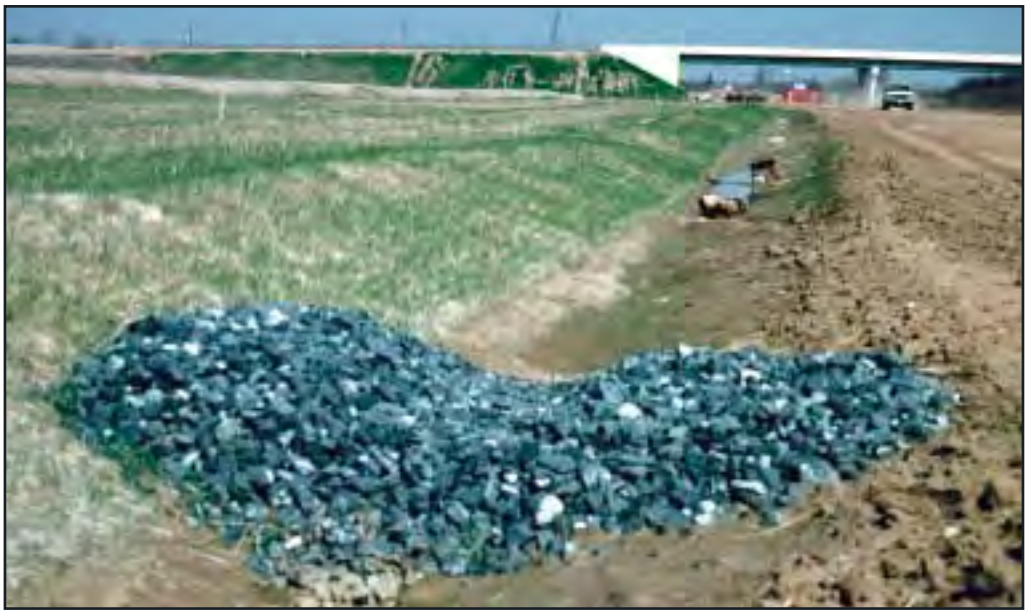
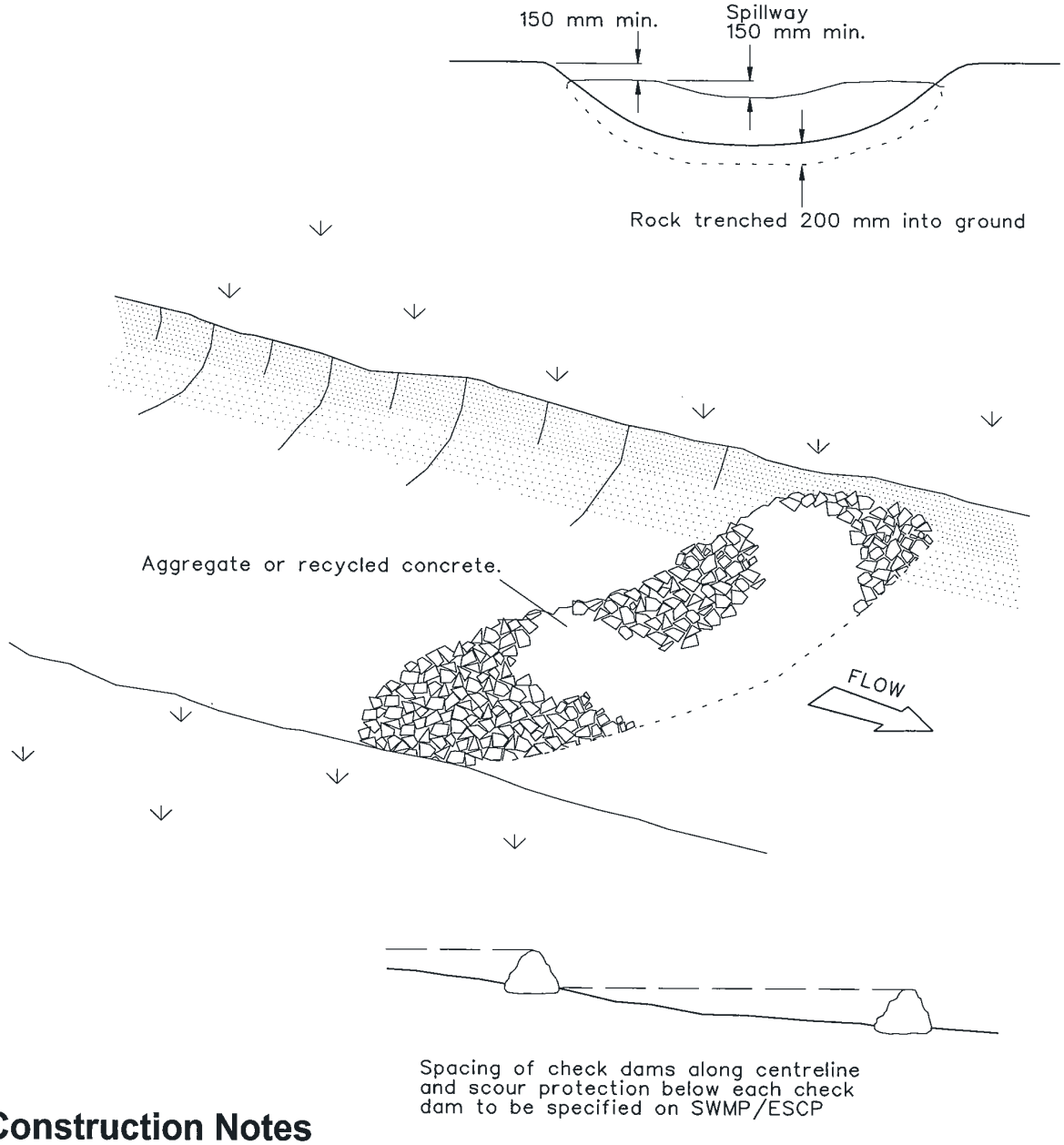


Figure 5.3(a) Use of rock check dams to reduce the erosive energy of flow

Figure 5.3(b)
Alternate check dam system. Where products like these are used, they should be installed with an appropriate erosion control blanket below them and covering at least 0.7 metres each side (c.f. SD 5-4)

(g) Outlets from all water conveyance structures should discharge water such that the erosion hazard to downslope lands and waterways is no greater than in the predevelopment condition up to the design storm event (Section 2.3.1 (e)). This can be achieved through use of water detention basins, waterways that increase the time of concentration, energy dissipaters, level spreaders, etc. Where permanent outlets discharge to watercourses, works should be of a "soft" design.

(h) Where appropriate, preparation for grassed waterway construction should involve:
- removal of trees, stumps and other debris that might impede flow of water or earthworks
- stripping and stockpiling of topsoil (Section 4.3.2)
- shaping the channel (to eliminate irregularities that would interfere with flow of water and provide a stable cross-section) and respreading topsoil
- applying appropriate ameliorants and/or fertilisers if rehabilitating by vegetative means (Section 7.2)
- applying ground covers.



Construction Notes

1. Check dams can be built with various materials, including rocks, logs, sandbags and straw bales. The maintenance program should ensure their integrity is retained, especially where constructed with straw bales. In the case of bales, this might require their replacement each two to four months.

2. Trench the check dam 200 mm into the ground across its whole width. Where rock is used, fill the trenches to at least 100 mm above the ground surface to reduce the risk of undercutting.

3. Normally, their maximum height should not exceed 600 mm above the gully floor. The centre should act as a spillway, being at least 150 mm lower than the outer edges.

4. Space the dams so the toe of the upstream dam is level with the spillway of the next downstream dam.

ROCK CHECK DAM

SD 5-4

(i) Where practical to do so, ensure that the design of permanent waterways mimics natural ecosystems. Use of rock and gravel, and planting out with local native vegetation can create waterways that are functional both for conveying discharges and as habitats and biological linkages. More information on the design of permanent waterways is contained in *Managing Urban Stormwater: Urban Design* (DEC, *in prep.*).

5.4.4 Temporary Water Diversion Structures

(a) Water diversion structures can be constructed from a wide range of substances, such as compacted earth, plastic sheeting, shotcrete, asphalt and pipes.

(b) As a first step in the design process, ensure that the route to be taken is considerate of all opportunities and constraints present at the site (Chapter 3). Select a route that avoids trees, preferably beyond their drip line, service infrastructure, etc.

(c) Where water diversion structures will outlet to downstream receiving waters (Section 5.3.5), ensure suitable water quality and quantity control structures are installed so that discharges meet the relevant guidelines. Ideally, discharge rates should mimic natural flows in terms of magnitude, seasonality, frequency and variability. Place any water quality and quantity control structures above the riparian zone, such as oil/grease interceptors, sediment traps/basins, litter traps, constructed wetlands and detention basins.

(d) Velocities should not exceed those recommended in Table 5.2 for the design storm event (Section 2.3.1 (e)).

(e) The design of *earth-based diversion structures* should not exceed those recommended in Table 5.1 in the design storm event (Section 2.3.1 (e)). The structures should be built following Standard Drawings 5-5 and 5-6. In addition, the following issues should be considered:

- additional lands that might be disturbed
- structures that need to be stabilised immediately
- downstream flow changes that need to be carefully assessed.

(f) Construct grassed waterways following processes that ensure an adequate root zone (Section 7.3). Note that:

(i) Where concentrated flows cannot be avoided immediately after planting, either initiate the grass lining with turf or where seed is used, protect the surface with a biodegradable mat; and

(ii) Ensure that grass cover is total and permanent, particularly in all areas of possible concentrated flow. Reestablishment might be necessary in bare areas, including replacement of any lost topsoil.

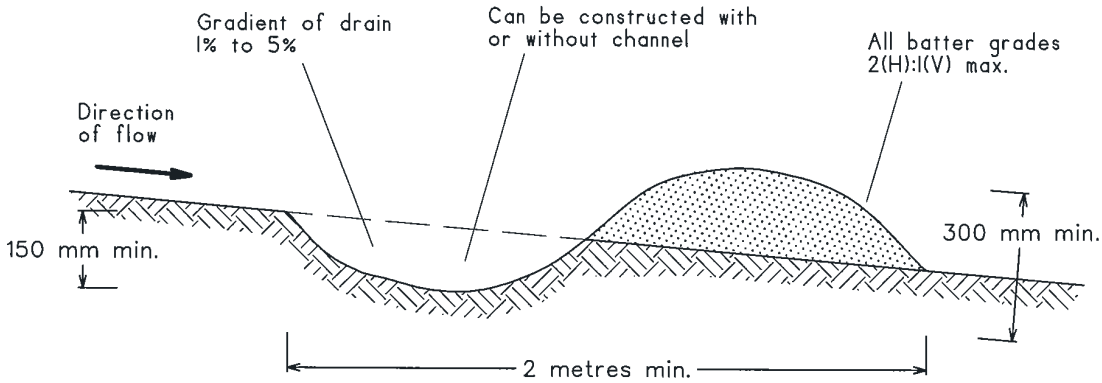
Table 5.2 Maximum Design Flow Velocities in Waterways (compiled from various sources)

Material			Critical velocity (m/second)	
Type	**Thickness (m)**	**Aggregate size (mm)**		
Gabions and reno mattresses	0.50	120-250	6.4	
	0.50	100-200	5.8	
	0.30	100-150	5.0	
	0.30	70-120	4.2	
	0.25	70-100	3.6	
	0.17	70-100	3.5	
	Weight each (kg)		Turbulent flow	Normal flow
Loose rock (assume 100 percent soil cover)	1,000		4.8	6.6
	500		4.2	5.7
	100		3.3	4.5
	50		2.8	3.8
	10		2.3	3.0
	Form			
Revetment mattresses	Storm mattress		>6.0	
	200 mm fp		6.0	
	125 mm fp		4.0	
	100 mm fp		2.0	

Assume that all soils with 10 percent or more dispersible fines have high erodibilities. Of those with less, soils with *K* -factors below 0.02 have low erodibilities, those between 0.02 and 0.045 have moderate erodibilities, while those above 0.045 have high erodibilities.

In addition, the figures here assume slope gradients of less than 10 percent and, where appropriate, good (>80 percent) ground cover. If good ground cover is not expected to be maintained properly (might die back seasonally or during short periods of drought) and is critical to the system, reduce all velocities by 1.0 metre per second. Alternately, seek the manufacurer's advice if these conditions are unlikely to be met.

Material	Critical velocity (m/second)											
	Inundation <6 hours			Inundation <12 hours			Inundation <24 hours			Inundation <48 hours		
	Soil erodibility			Soil erodibility			Soil erodibility			Soil erodibility		
	Low	Moderate	High	Low	Moderate	High	Low	Moderate	High	Low	Moderate	High
High performance bonded plastic fibres (vegetated)	7.0	7.0	7.0	6.0	6.0	6.0	5.0	5.0	5.0	4.0	4.0	4.0
Plastic fibres with netting	5.0	5.0	5.0	4.3	4.3.	4.3	3.6	3.6	3.6	3.0	3.0	3.0
Mesh reinforced pregrown turf	3.0	2.7	2.4	2.6	2.3	2.0	2.3	2.0	1.8	2.0	1.8	1.6
Kiku yu	2.5	2.2	1.9	2.1	1.9	1.6	1.9	1.7	1.4	1.6	1.4	1.2
Jute or coir mesh (close weave, bitumen sprayed)	2.3	2.0	1.7	1.9	1.7	1.5	1.7	1.5	1.3	1.5	1.3	1.1
Coconut/ jute fibre mats	2.3	2.0	1.7	1.9	1.7	1.5	1.7	1.5	1.3	1.5	1.3	1.1
Couch , carpet grass , Rhodes grass , etc.	2.0	1.8	1.4	1.7	1.5	1.2	1.5	1.4	1.1	1.3	1.2	0.9
Bare soil	0.7	0.5	0.3	0.6	0.4	0.3	0.5	0.4	0.2	0.4	0.3	0.2

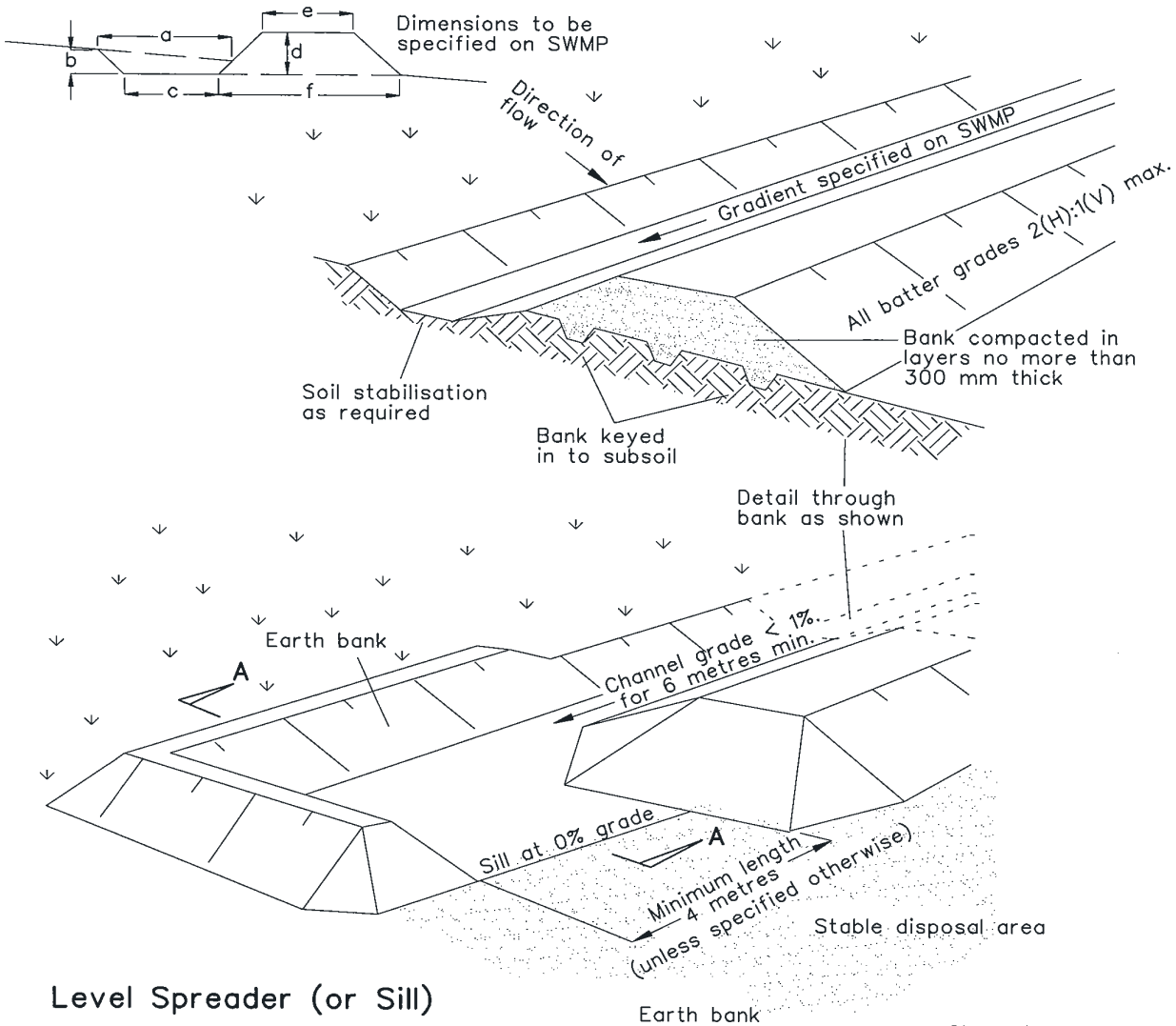


NOTE: Only to be used as temporary bank where maximum upslope length is 80 metres.

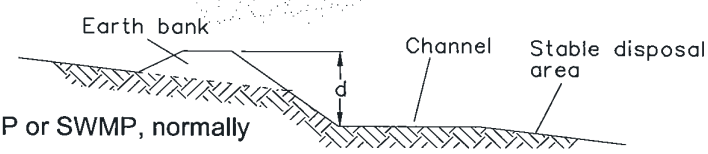
Construction Notes

1. Build with gradients between 1 percent and 5 percent.
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V shaped.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction.

EARTH BANK (LOW FLOW) SD 5-5



Level Spreader (or Sill)



Section AA

Construction Notes

1. Construct at the gradient specified on the ESCP or SWMP, normally between 1 and 5 percent
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V-shaped, at the dimensions shown on the SWMP.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction following Table 5.2 in Landcom (2004).
7. Where discharging to erodible lands, ensure they outlet through a properly constructed level spreader.
8. Construct the level spreader at the gradient specified on the ESCP or SWMP, normally less than 1 percent or level.
9. Where possible, ensure they discharge waters onto either stabilised or undisturbed disposal sites within the same subcatchment area from which the water originated. Approval might be required to discharge into other subcatchments.

EARTH BANK (HIGH FLOWS) SD 5-6

(g) Grassed waterways should not be confused with grass swales. Rather than being simple water conveyance structures, grass swales are used to infiltrate stormwater to the watertable where the soils are Soil Hydrologic Groups A or B and the floor of the structure is at least two metres from any seasonal or permanent watertable. Grass swales should not be used to convey sediment-laden water because their infiltration abilities can be greatly reduced by it.

(h) Consideration might be given to the use of other *fabrics*, including jute mesh and other biodegradable blankets to line waterways. These can provide temporary protection to earth-based drains intended to be removed or upgraded within six months, or grassed waterways that have only recently been established from seed or runners. Nevertheless:

(i) Ensure topsoil is at least 75 mm deep; and

(ii) Install the fabric following Standard Drawing 5-7 after grading, seeding and fertilising is completed (Chapter 7) so that it is continuously in contact with the soil.[11]

(i) Gravel or rocks form one of the simplest kinds of linings (figure 5.4) and can be made to withstand most velocities in waterways if the proper sized materials are selected (Table 5.2). Where rocks are used, place them above a filter layer of suitable geotextile and, where necessary, properly graded layers of sand and gravel. Rocks are particularly useful in critical sections of waterways, such as bends and outlets. Gravel layers are useful for protecting any geofabric from tearing as the rocks are juggled into locking positions. Soil should be packed in all layers to:

- enable moisture transfer from the substrate to the waterway itself
- allow sedges and grasses to be planted in the rock voids.

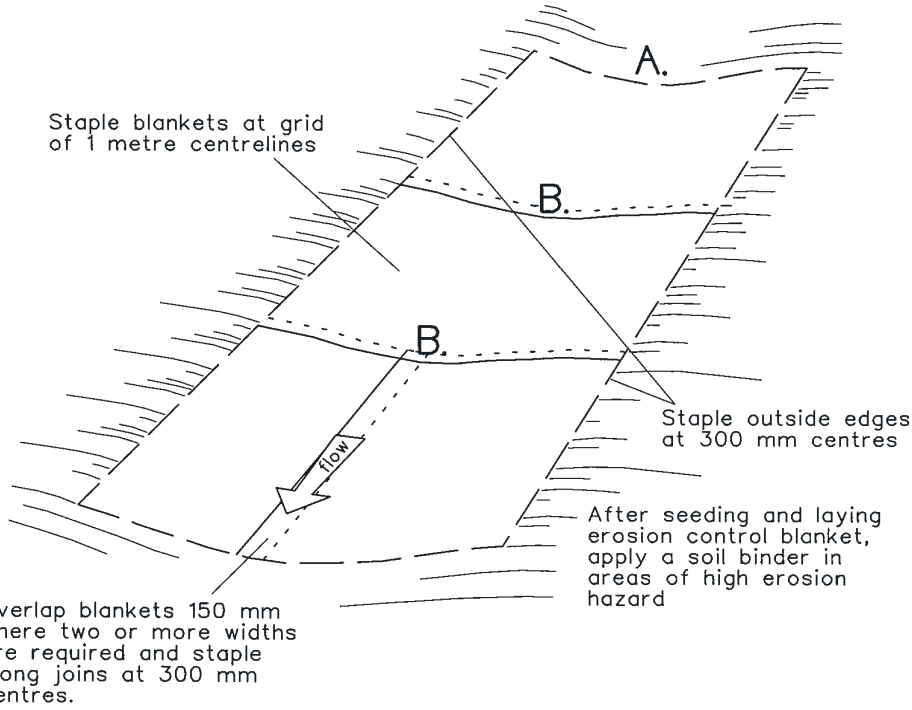
The roots of the vegetation will be protected by rocks and will enhance the locking effect. Also, vegetation will add to the ecological values and impart a more pleasing aesthetic effect.

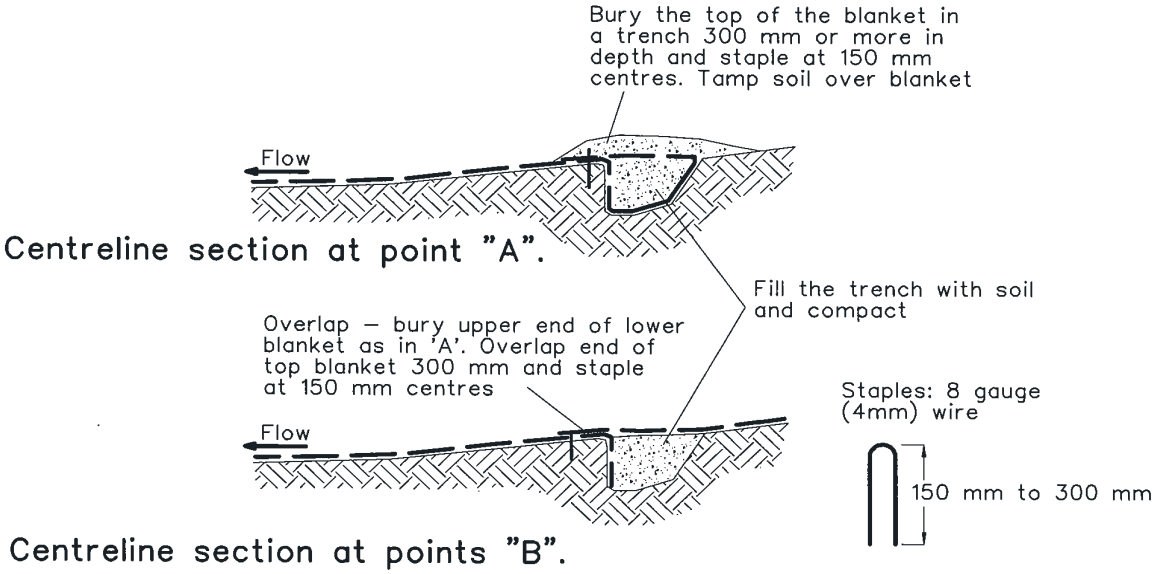
(j) concrete, concrete-filled mattresses, shotcrete and asphalt can be used to line waterways, form chutes or to convert concentrated flow into sheet flow. Note that:

(i) These structures should be used only in situations where ecological functions are non existent or have no potential. Even so, these materials should never be used in watercourses.

(ii) Their impermeable, smooth surfaces usually result in higher velocities in drains and consequent erosion of natural waterways downstream unless protective measures are installed; and

11. In this situation, omit cover crop species from the mix because they have a higher retardance effect and might cause overtopping of the drain in large storm events.





Construction Notes

1. Remove any rocks, clods, sticks or grass from the surface before laying matting
2. Ensure that topsoil is at least 75 mm deep.
3. Complete fertilising and seeding before laying the matting.
4. Ensure fabric will be continuously in contact with the soil by grading the surface carefully first.
5. Lay the fabric in "shingle-fashion", with the end of each upstream roll overlapping those downstream. Ensure each roll is anchored properly at its upslope end (Standard Drawing 5-7b).
6. Ensure that the full width of flow in the channel is covered by the matting up to the design storm event, usually in the 10-year ARI time of concentration storm event.
7. Divert water from the structure until vegetation is stabilised properly.

RECP : CONCENTRATED FLOW

SD 5-7

Figure 5.4
A rock-lined waterway

(iii) Concrete linings tend to be more durable than asphalt and require less maintenance.

(k) Chutes (figure 5.5) should have a minimum depth of 300-mm. In addition:

- bends should be avoided
- anchor lugs should be provided at a maximum of 3-metre intervals
- inlet and outlet sections should be at least 1.5 metres long
- energy dissipaters should be provided at the outlet to bring the flow to non erosive velocities.

Concrete chutes should never be used in watercourses. Use riprap instead.

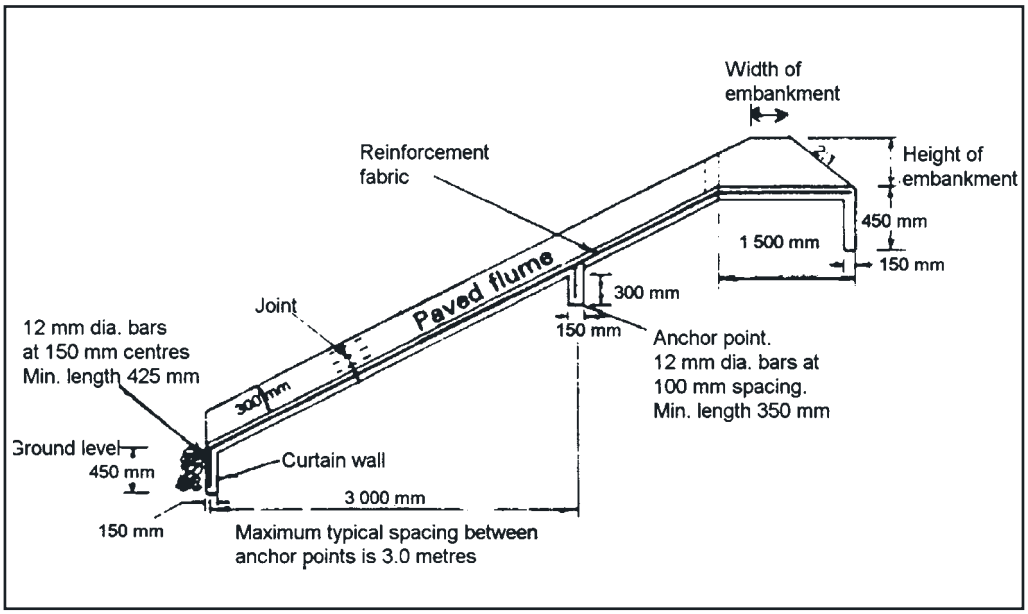


Figure 5.5 Cross-section of a typical paved chute (adapted from Virginia SWCC, 1980)

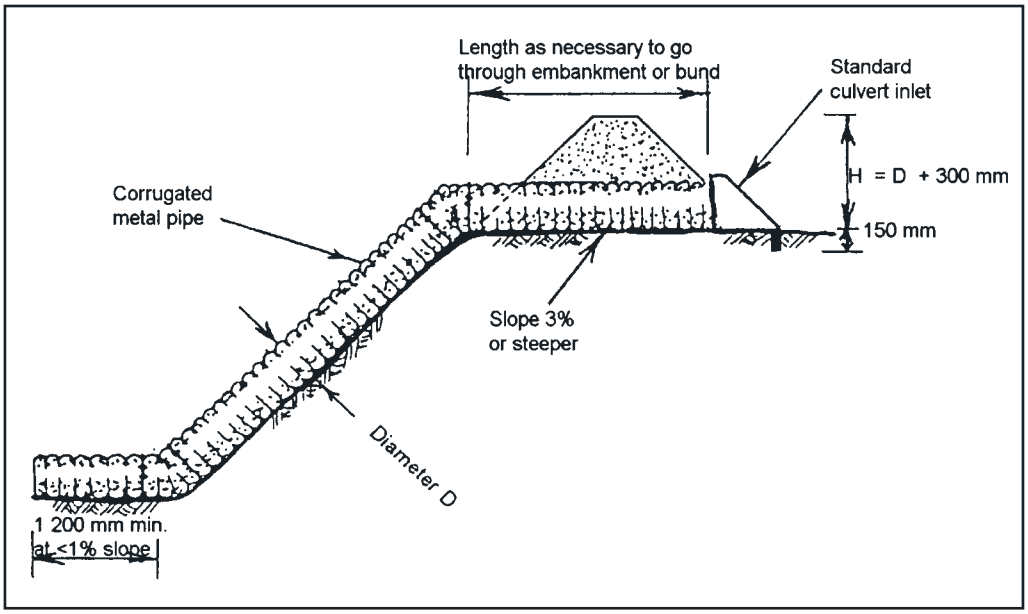


Figure 5.6 Cross-section of a typical pipe drain (adapted from USDA, 1975).

Figure 5.7 Use of heavy-duty flexible pipe to carry water down a batter

(l) Pipes. Half-round corrugated metal or concrete pipes or heavy-duty flexible pipes (figures 5.6 and 5.7) can be used as drains to transport water down steep slopes, e.g. batters. Install them progressively as construction proceeds and their design criteria should include an inlet section with a slope of greater than 3 percent. Ensure any embankment over the inlet of the pipe is a minimum of 300 mm higher than the soffit, and the soil around and under it compacted at least by hand and in half metre layers.

5.4.5 Energy Dissipaters and Outlet Protection

(a) Energy dissipaters can be used to mitigate erosion of drains and their outlets through reductions in water velocity. They are usually permanent structures and constructed with riprap, grouted riprap, gabions, recycled concrete or concrete. Where possible, concrete, grouted riprap, recycled concrete and mesh structures should not be used in watercourses. Rather, they should be constructed of riprap consisting of angular run-of-quarry durable rock and designed to mimic the natural function and appearance of the watercourse.

(b) Drains should discharge water to stable disposal areas including:

Figure 5.8
A riprap outlet on a steep slope.

- well-vegetated or otherwise stable lands (figure 5.8)
- other temporary diversions, drop-down structures[12] or culverts
- watercourses.

(c) Where structures outlet to a watercourse, ensure they:

- do not protrude beyond the stream bank and align evenly with it
- are placed at the invert level of the stream
- point downstream.

Further

(i) stockpile any excavated litter, topsoil and subsoils materials separately for later site rehabilitation;

(ii) if scour is likely, ensure the bed is properly protected (see below);

(iii) protect the opposite bank from scour as might be necessary, in consideration of the bank materials and the "jet" effect; and

(iv) if salinity is an issue, ensure the pipe/culvert specifications conform to Australian standards.

12. Usually formed where the catch drains cross depressions or other waterways.

(d) Sometimes, upstream control works can reduce velocities at stormwater outlets. This can have a positive effect by reducing the sizes of energy dissipaters below.

(e) Design criteria for energy dissipaters (Standard Drawing 5-8) should ensure:

- downslope conditions post development are not less stable than those prevailing predevelopment up to the design storm event (Section 2.3.1 (e))
- minimum maintenance requirements, preferably self-cleaning natures
- drainage by gravity when not in operation.

(f) Energy dissipaters can be categorised into groups where energy is either absorbed by impact through an obstruction in the flow path, and/or dissipated through a hydraulic jump in a large stilling pool. Riprap aprons at the outlet of a pipe or culvert of diameter D, should be at least 300 mm deep, 3D wide at the pipe end, underlain by needle-punched geotextile, and constructed according to the following:

(i) Decide whether minimum or maximum tailwater conditions apply using Q_{peak} in the receiving channel;[13]

(ii) Enter the appropriate chart (figures 5.9 and 5.10) to find riprap size and apron length; and

(iii) Where both minimum and maximum tailwater conditions apply, design the apron to cover both conditions (figure 5.11).

(g) Stabilise lands at and beyond outlets with a protective ground cover (Chapter 7). Within watercourses, ensure all rocks and cobbles in any permanent structures are packed with topsoil and planted with local native grasses, sedges and rushes. In disturbed areas in riparian zones (e.g. spoil areas, access tracks, etc.), plant local native shrubs, trees and groundcover species. Ensure these matters are properly addressed in a separate *Vegetation Management Plan* (Appendix I).

5.4.6 Subsoil Drainage

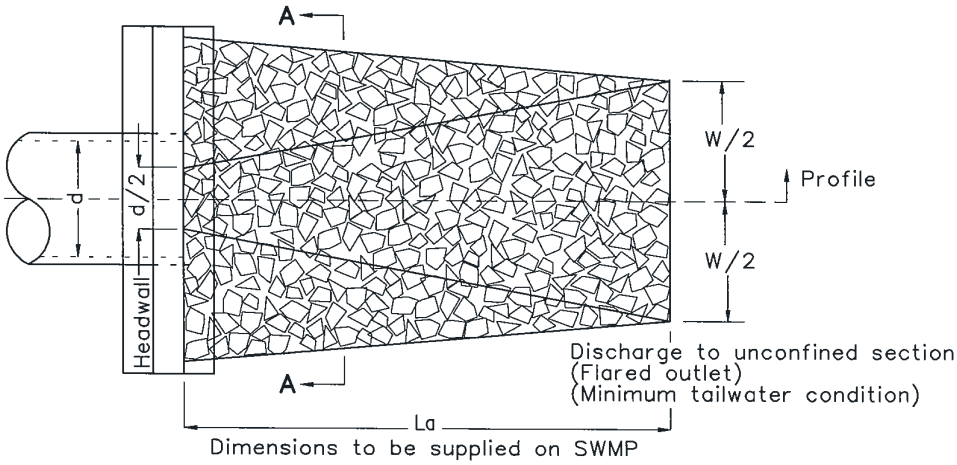
(a) Subsoil drains provide a means for controlled flow of water through the soil. They must be designed and installed only after any salinity issues have been addressed fully. Types of subsoil drains include:

(i) strip drains, comprising geotextile filters over non corroding, rot-proof, plastic cores;

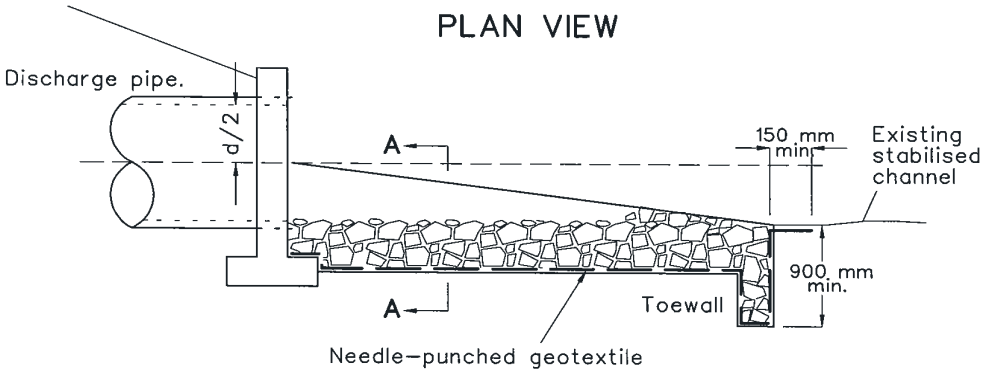
(ii) rubble drains; and

(iii) perforated or slotted pipes.

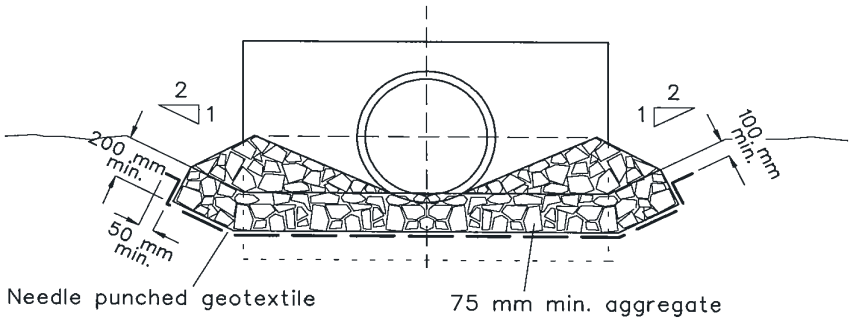
13. Calculate the depth of flow in the receiving channel and compare with the pipe diameter (Do)
– minimum tail water conditions are <0.5Do, while maximum conditions are >0.5Do. Note that:
– Where a well-defined channel does not occur, minimum tail water conditions apply and the width of the downstream end of the apron should be equal to the pipe diameter plus the length of the apron
– Where a well-defined channel occurs immediately downstream, the width of the downstream end of the apron should be equal to the width of that channel.



PLAN VIEW



PLAN VIEW



CROSS SECTION AA

Construction Notes

1. Compact the subgrade fill to the density of the surrounding undisturbed material.
2. Prepare a smooth, even foundation for the structure that will ensure that the needle-punched geotextile does not sustain serious damage when covered with rock.
3. Should any minor damage to the geotextile occur, repair it before spreading any aggregate. For repairs, patch one piece of fabric over the damage, making sure that all joints and patches overlap more than 300 mm.
4. Lay rock following the drawing, according to Table 5.2 of Landcom (2004) and with a minimum diameter of 75 mm.
5. Ensure that any concrete or riprap used for the energy dissipater or the outlet protection conforms to the grading limits specified on the SWMP.

ENERGY DISSIPATER SD 5-8

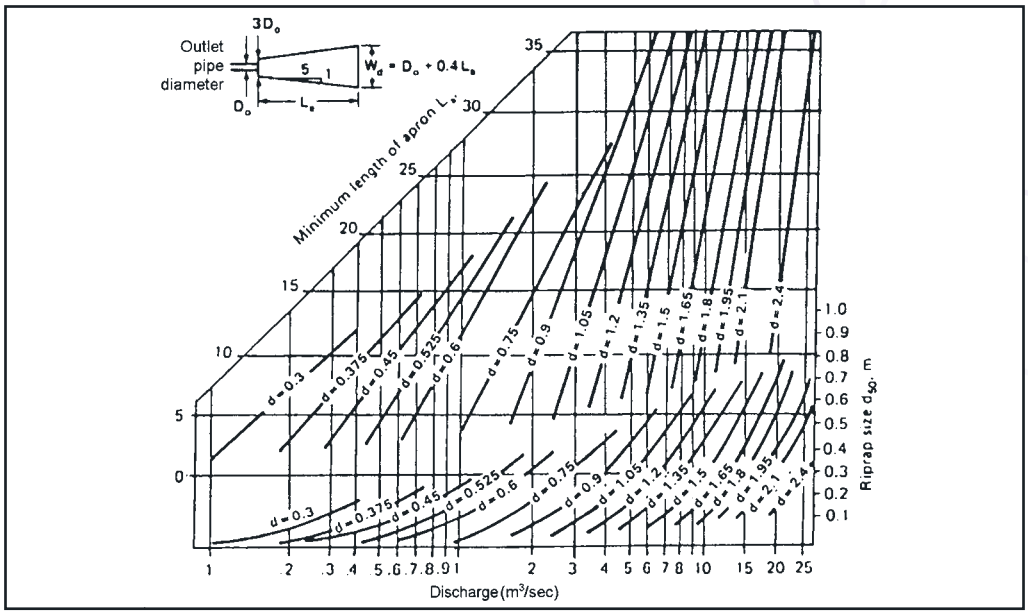


Figure 5.9 Design of riprap outlet protection - maximum tailwater conditions apply (MWRA, 1983)

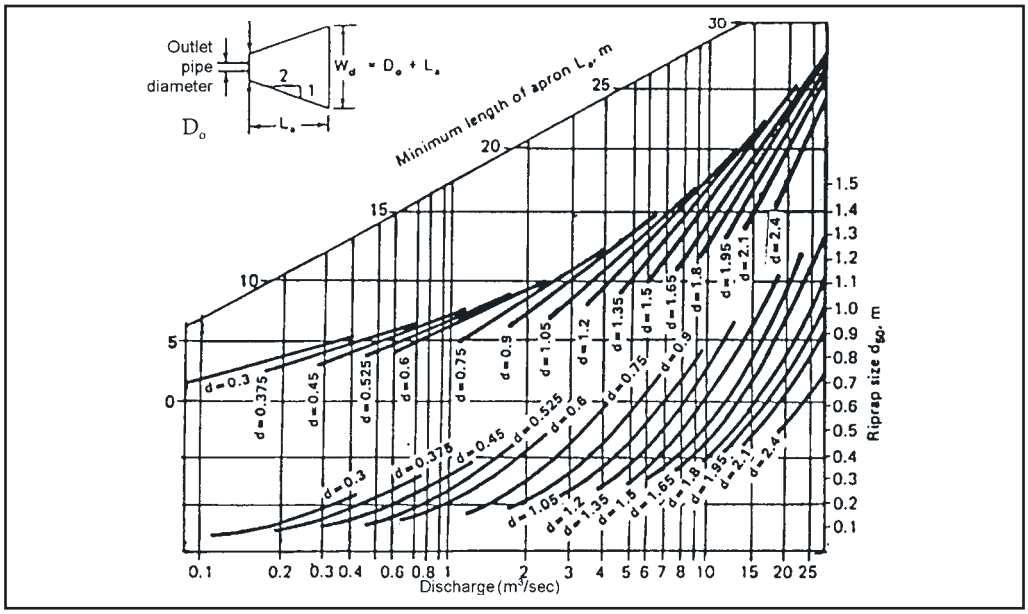


Figure 5.10 Design of riprap outlet protection – minimum tailwater conditions (MWRA, 1983)

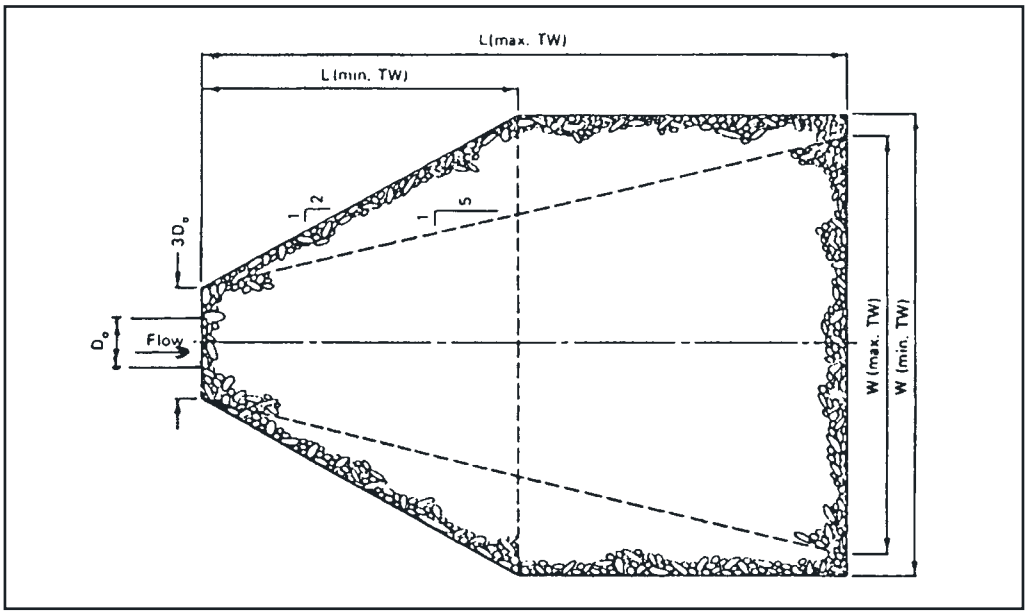


Figure 5.11 Riprap configuration for outlet protection under both maximum and minimum tailwater conditions (Bohan, 1970)

(b) Subsoil drainage can be installed to:

  (i) improve the soil environment for vegetative growth by regulating ground water flow, especially in grassed waterways and other low lying areas, recreation areas (such as ovals), and dry detention basins; and

  (ii) provide drainage of ground water on steep slopes to improve stability.

(c) Line rubble drains and perforated pipes with geotextile to act as both filters and separators. This is critical where permanence is required and the subgrade is finer than 0.02 mm and/or more than 10 percent of the whole soil material consists of dispersible fines (Section 6.3.3 (c) and following sections).

(d) When rubble drains or slotted pipes are used, they should be:

  (i) placed at a horizontal spacing that is consistent with the soil permeability and the desired surface amenity. As a general guide, place slotted pipes at a minimum depth of 0.6 metres below the soil surface while extending rubble drains to a depth of at least 0.6 metres; and

  (ii) ideally, designed to provide a minimum gradient of 1 percent.

Chapter 6

SEDIMENT AND WASTE CONTROL

6. Sediment and Waste Control

6.1 Introduction

6.1.1 Background

(a) This chapter has been written as an aid to professional designers to allow for better consideration of sediment pollution from disturbed lands such as urban construction sites, mining sites and the like. As with the rest of these guidelines, though, it does not consider farming lands. While the chapter's main focus is the control of erosion of soils and pollution from sediment and waste during the land disturbance phase, very brief discussion is also provided for long-term pollution control where this is appropriate.

(b) Stormwater treatment measures installed after construction is completed are not highlighted in this chapter. Specific information on this topic can be found in *Managing Urban Stormwater: Treatment Techniques* (EPA, 1997b; DEC, *in prep.*) and relating to such matters as:

- swales and "bioretention" measures
- infiltration measures
- constructed wetlands
- gross pollutant traps and trash racks
- litter baskets and litter booms
- oil/grit separators
- other treatment measures.

Additional information on constructed wetlands is provided by *The Constructed Wetlands Manual* (DLWC, 1998).

(c) Stormwater runoff from disturbed lands has become a major source of pollutants in New South Wales' waterways, particularly as some of the more marginal urban lands have been developed around Sydney, Newcastle and Wollongong. This chapter concentrates on diffuse or non point source pollution from land development activity.

(d) The form that diffuse pollution takes is usually determined by:

- climate, particularly local rainfall patterns
- geomorphic aspects and soil characteristics of the source area
- human and other activities in the catchment.

Contaminants are mainly transported by wind, rainfall or overland flow. Overland flow is especially relevant in areas with unprotected land surfaces or associated with particles that have settled on impervious surfaces.

(e) The quality of runoff also depends on the stage of works. For example:

(i) where much of the catchment lacks a suitable protective ground cover while development is going on, a potential exists for significant soil erosion of any exposed surfaces; and

(ii) where a significant proportion of the catchment has been developed and rates of runoff are high due to many impervious areas, a potential exists for pollution to downslope lands and waterways by nutrients, heavy metals, various chemicals and the like.

6.1.2 Pollutants

(a) The pollutants discussed and/or referred to in this document include:

(i) suspended solids, especially sediment, that might carry nutrients "piggyback" and reduce:
- light penetration in water and affect growth of aquatic plants
- suitability of habitats for some aquatic flora and fauna
- the aesthetic appeal of water;

(ii) nutrients that can promote the rapid growth of aquatic plants, particularly algae. Where algal growth becomes too dense:
- reduction occurs in light penetration of water
- oxygen levels of water can drop (see (iii), below)
- suitability for recreation, irrigation, etc. diminishes, particularly if toxic algae are present;

(iii) oxygen-demanding materials that deplete levels of dissolved oxygen in the water causing conditions to become anaerobic and, in turn, resulting in either decay or death of submerged plants and other benthic (bottom-dwelling) organisms.[1] These materials are usually measured in water as biochemical oxygen demand (BOD), and include biodegradable organic debris, such as decomposing litter and vegetation;

(iv) litter that is commonly washed from pavements and can be at high levels, especially in "first flush" waters; and

(v) microorganisms that frequently occur at high levels, especially in urban runoff, and associated with sewage/septic outfalls, animal faeces, soil, decaying vegetation and putrescible matter. Microorganisms that might make the water unsuitable for swimming or drinking are not discussed further here.

(b) Two features of sediment pollution are:

(i) studies at Lake Illawarra show that, where associated with new urban development for example, sediment pollution levels can be five to 20 times greater than those from developed urban areas and three to five times greater than those from undisturbed bushland; and

1. This situation often occurs when the available oxygen is used up by microorganisms that help in the decay process when plant materials die or an influx of other organic matter occurs. Various pollutants stored in sediment can be released under these conditions including phosphorus and some heavy metals. Some of these pollutants can promote further algal growth and a cycle is formed that is difficult to break.

(ii) many pollutants such as nutrients, are absorbed on and transported by suspended sediment particles, especially the finer (<0.005 mm) colloidal materials. Relatively coarse particles (>0.02 mm) hold very few pollutants.

Figure 6.1 Sediment deposition below a housing construction site. As a result, the bitumen road and kerb and gutter are barely distinguishable – only a drop inlet is clearly visible

Figure 6.2 Sediment resulting from unsatisfactory rehabilitation following roadworks

6.1.3 General Recommendations

(a) Where it is an option, erosion and sediment control at land development sites is the least expensive and the single most effective way to reduce water-borne pollution. It should be regarded as a major priority.

(b) Works should not cause either new seepage areas through rises in the watertable or pollution of aquifers.[2]

(c) Some aspects of sediment and nutrient management structures should not be deliberately combined, e.g. nutrient removal ponds (e.g. wetlands) should not be required to play a major role in removal of sediment. Nevertheless, each of these structures should be expected to remove various pollutants, but with varying degrees of effectiveness and with implications for design. However, nutrient removal ponds can be used for temporary sediment control during the construction phase when few nutrients are generated.

(d) The approach should be implemented completely to ensure that the desired degree of soil and water management is achieved. To be effective, it should address control/mitigation of pollution of suspended solids through reduction of soil erosion and minimisation of sediment pollution using:

   (i) drainage systems designed to minimise both the quantity of flow and its velocity, especially on unprotected land surfaces; and

   (ii) system controls that reduce the quantity of suspended solids reaching receiving waters, such as sediment retention basins, sediment traps and constructed wetlands.

(e) Be pragmatic in application of design criteria. Lower standards might be negotiable if the location and design of a particular structure meet a significant majority (e.g. >90%) of requirements and costs for the remaining parts are excessively high (in terms of capital and/or increasing the erosion hazard elsewhere). However, approval for any lower standards should be sought first with the consent authority. It is expected that application of lower standards will:

   (i) be offset through application of more stringent erosion controls, i.e. modification to BMPs elsewhere; and

   (ii) ensure that the viability of ecosystems downslope and aesthetic values are not compromised.

2. Rises in watertables through poor stormwater management practices are never encouraged and, especially, where the soils tend to have saline ground water. Many examples exist in New South Wales where extensive land degradation and damage to works have occurred because of what is now known as dryland salinity. While the principles of water sensitive urban design are strongly supported, the implications of encouraging water to infiltrate the ground should be thoroughly investigated always.

(f) Construct temporary works for control of pollution to be stable in runoff from the design storm event, usually taken to be the 10-year ARI time of concentration event. Design should take into consideration the implications of larger storm events and emergency spillways should be constructed where appropriate.

6.2 Waste Control

(a) Safe management of waste materials, such as paint, concrete slurry, acid, toilet effluent, cleared vegetation, garbage and various chemicals, should be applied at all land disturbance sites. The Protection of the Environment Operations Act, 1997 makes it an offence to allow any of the above materials to leak, spill or escape from the site or to place it where it might harm the environment.

(b) The following waste management practices should be applied:

(i) If possible at the design stage:
- design to standard sizes
- specify recycled and recyclable products
- specify reusable, repairable materials and fittings
- renovate or refurbish, rather than rebuild
- incorporate a composting area into the landscape design.

(ii) If practical during the demolition/extraction phase:
- separate reusable materials for reuse on or off site
- sell reusable materials to second-hand dealers
- reuse rock, topsoil and vegetation on the site
- stockpile materials for use elsewhere.

(iii) If practical during the construction phase:
- reuse materials from the demolition/extraction phase
- mulch and reuse as much green waste as you can
- order materials to size
- do not over order
- order precut or prefabricated materials
- purchase materials with minimal packaging
- separate reusable or recyclable materials from waste
- look out for and participate in recycling opportunities
- organise onsite sorting and/or collection systems for reprocessing
- train site workers not to damage or contaminate materials or off cuts so they can be reused elsewhere.

(iv) Store all possible pollutant materials well clear of any poorly drained areas, flood-prone areas, streambanks, channels and stormwater drainage areas. Such materials should be stored in a designated area, under cover where possible. Containment bunds should be constructed with provision for collection and restorage of any spilt material.

(v) Wash down materials and equipment away from the foreshore and intertidal areas.

(vi) Waste receptacles should also be placed away from the foreshore and intertidal areas. Where this is impractical, they can be placed there providing they are not overloaded and are watertight. Further, they should be provided with suitable waterproof covers for use during rain and site shutdown (e.g. weekends and nights) to prevent entry of water and vermin, and litter being blown around the area.

(vii) Ensure that runoff from polluted hard surfaces like roadways and vehicle hard stand areas is properly treated before discharge to the stormwater system.

(viii) Place staff facilities so that any effluent, including wash-down water, can be totally contained and treated within the site management area. Inform staff of the nature of each facility and of their obligation to use them.

(ix) For vegetation:

- preferably reuse waste materials onsite by chipping, mulching or composting, particularly where they can be used in rehabilitation programs
- otherwise:
  - gain necessary approvals from the local consent authority to remove it to an approved landfill; or
  - gain necessary approvals from the local council before burning waste in the open or by trench burning.

(x) Shift sorted waste only in an approved manner by means of suitable transport to licensed landfill sites.

(xi) Clear any bins of concrete and mortar slurries, paints, acid washings, light-weight waste materials and litter at least weekly or more frequently if they fill.

(xii) Provide designated waste collection areas with appropriate bunds or containers and maintain waste disposal and collection systems to operate within their capacity.

(xiii) Be careful in the disposal of used chemical containers and in the management of runoff and sediment loss from areas treated with pesticides (where possible use less hazardous or alternate material and comply with manufacturer's safety/usage directions).

(xiv) Dewatering activities should be closely monitored to prevent pollution in the form of sediment, toxic materials or petroleum products. Sediment controls should be established and testing of ground water should be undertaken before commencement of dewatering activities.

(xv) Prevent the discharge of pollutants to stormwater because of vehicle and equipment maintenance. This can involve using offsite maintenance facilities or undertaking work in designated and bunded areas only. Regular checks

should be undertaken to ensure leaks and spills are rectified and cleaned immediately. Employees and subcontractors should be trained in this regard.

(xvi) Dispose of waste to landfill only as a last resort. Landfill sites and waste transfer stations will:

- require correct handling for dusty or hazardous wastes
- impose price penalties for mixed loads
- offer discounts for sorted wastes, such as bricks, metals and timber.

(xvii) Depending on the size of the job, the local council might require a waste management and minimisation plan. This will set out the type and volumes of any waste materials generated on the job, and explain reuse, recycle and disposal processes.

6.3 Sediment Control

6.3.1 Preamble

(a) Sediment retention basins are dams or impoundments designed to intercept sediment-laden runoff and retain most sediment and other materials, thereby protecting downstream waterways from pollution. The retention is generally achieved by the settling of the suspended sediment from the stormwater flow, combined with the interception of bedload material.

(b) Like other measures employed to control erosion and sediment at construction sites, sediment basins should be regarded as one component (or "carriage") in a properly planned "treatment train" (Section 1.2(b) (ii)). As previously stated, the control of soil erosion is the best way of minimising sediment pollution of receiving waters, an especially important principle with fine-grained soils. Sediment basins should be regarded like a fullback in a football team – a final control to be used when all others fail. However, as all construction activities inevitably disturb or expose soil materials, sediment basins (together with filters and traps) are frequently an important component of soil and water management on disturbed lands. As with a fullback, they are an essential part of the team or treatment train.

(c) The choice of sediment control measures is not limited to those nominated in this document. Creativity, combined with a sound understanding of the principles presented here, should allow other measures to be adopted to suit circumstances, provided those measures can be justified properly.

(d) Be aware that current legislation requires that the quality of runoff water leaving any work site must be of an acceptable standard and that this legislation does not make allowance for:

- particular difficulty with the site
- specific or general problems in carrying out the *ESCP/SWMP*
- whether the site manager is familiar with site-work management.

6.3.2 General Recommendations

The following issues should be considered in relation to the control of sediment:

(a) Design structures to minimise land disturbance.

(b) Pass any potential sediment-laden stormwater runoff through a trap or basin designed to minimise pollution to lands, waterways and services placed further downslope. Keep sediment as close to its source as possible.

(c) Where possible, do not construct sediment basins on line on a watercourse.

(d) Some small and/or flat sites might not warrant construction of a sediment basin, including those for which an *ESCP* (rather than a *SWMP*) is required (<2,500 square metres disturbed area). If in doubt, the average annual soil loss from the total area of land disturbance can be estimated (Appendix A). Where this is less than 150 cubic metres per year, the building of a sediment retention basin can be considered unnecessary. In such circumstances, alternate measures may be employed to protect the receiving waters.

(e) Design of sediment retention basins should ensure that water is not diverted from its intended flow path if structures become filled with sediment in the nominated storm event.

(f) Where practical, place sediment control structures:

  (i) so that only waters polluted because of site land disturbance activities enter them (i.e. waters from off-site sources and/or those from the site that are clean should be diverted elsewhere);

  (ii) off-line, so that trunk drainage carries only relatively clean water;

  (iii) away from normal construction operations (to minimise the need for regular repair); and

  (iv) upstream of any wet ponds, constructed wetlands or receiving waters.[3]

(g) Soil erosion and any resultant sediment pollution are largely dependent on storm size and nature of the soils. Ensure that the design:

3. Here, "waters" mean:
   - street gutters
   - natural waterbodies, including lakes, lagoons or wetlands, rivers or streams, and tidal waters, e.g. bays, estuaries, inlets, etc.
   - constructed waterbodies, including lakes, wetlands, dams, ponds, waterways, channels or canals.

(i) allows adequate time for settling of the desired particle sizes; and

(ii) has adequate capacity to trap and store sediment eroded from the site.

(h) Where practical, do not decommission temporary sediment retention basins and traps until the works for which they were designed are completed and fully stabilised on more than 90 percent of the contributing catchment. Address the financial and other implications in the planning phase where this involves other developers or site operators.

6.3.3 Design of Sediment Basins

(a) When designing sediment retention basins, two principal criteria should be considered at the outset – the structures must have an ability to meet:

- appropriate water quality standards – discussed further below
- necessary structural integrity and stability standards.

Normally, sediment basins and their outlets should be designed to be stable in the peak flow from at least the 10-year ARI time of concentration event. However where individual circumstances dictate, adopting higher design standards for basin outlets might be necessary. Basins might need to be referred to the Dam Safety Committee if the wall is more than 15 metre high and/or failure could adversely affect the community's interests or the environment downstream. Further details on prescribed dams and surveillance requirements are at:

www.damsafety.nsw.gov.au/ftp/publications/pdf/dsc01.pdf.

(b) The effective design and operation of sediment retention basins from a water quality perspective depends primarily on the nature of the soil materials likely to be eroded and washed into them. Protection of downstream lands and waterways demands an approach to basin design that recognises the settling behaviour of different soil particles in water. Clearly, coarse-grained sediment will settle quicker than finer-grained sediment, whereas some clay particles seemingly never settle unaided.

(c) Soil materials that can erode and find their way to a sediment retention basin can be classified into three "texture" groups based on how effectively they are likely to settle:

- *"Type D"* soils that contain a significant proportion of fine (<0.005 mm) "dispersible" materials that will never settle unless flocculated[4]

4. Not all particles finer than 0.005 mm are dispersible. Clays are complex laminated structures comprising alternating sheets of alumina and silica. Typical structural groupings based on silica to aluminium ratios are:
   - 1:1 (kaolinite type) clays
   - 2:1 low expansion (illite) clays
   - 2:1 high expansion (montmorillonite, bentonite, smectite) clays.

   The structural grouping of the clay minerals can influence important soil properties, e.g. cation exchange capacity, shrink/swell potential, fertility and dispersibility. Illite structures can become dispersible if deformed while wet while montmorillonite structures tend to be dispersible always.

The other two categories cover those soils that are not dispersible:

- *"Type C"* soils, the bulk of which are coarse-grained (less than 33 percent finer than 0.02 mm) and will settle relatively quickly in a sediment retention basin
- *"Type F"* soils, the bulk of which are fine grained (33 percent or more finer than 0.02 mm) and require a much longer "residence" time to settle in a sediment retention basin.

(d) When deciding which soil type applies to a particular land disturbance activity, consider the following matters:

(i) Where soils of more than one type are present at a specific site, sediment basins should be designed to meet the most stringent criterion applicable. In this, note that soils that are essentially coarse-grained can be *Type D*.

(ii) No matter whether soils are classified as *Type D, Type C* or *Type F*, ensuring that pollution does not occur to downslope receiving waters is essential. To this end, treated discharge waters should not contain more than 50 milligrams per litre of suspended solids in the design rainfall event. More stringent requirements might be necessary in particularly sensitive environments or, where applicable, can be required by Council's stormwater management plan. Of course, all practical measures to reduce pollution should be taken for storm events beyond the design event.[5]

(e) Soils that are dispersible *(Type D)* and require flocculation (Appendix E) are those where more than 10 percent of the materials are dispersible. That is, where the percentage clay plus half the percentage silt (roughly the fraction <0.005 mm) multiplied by dispersion percentage (Ritchie, 1963) is equal to or greater than 10. [6]

(f) A simple field test is available that can eliminate the need for laboratory testing for dispersibility. This is the "field" Emerson Aggregate Test and is described further at Appendix E. However, soils that fail this test are not necessarily dispersible to the extent that flocculation is obligatory and laboratory analysis of dispersion percentage might still be required.

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5. The actual discharge load should be considerate of the loads normally carried in the receiving waters, including those during and following storm events. Any fluvial processes within these waters will have reached equilibrium considerate of those loads. Reducing them significantly below these levels can cause streams to become "hungry" and erode their own bed and banks; while increasing them significantly can result in degradation to ecosystems.
6. Hazelton and Murphy (1992) provide a means of using Soil Texture Class as a guide to particle size distribution. Note that:
   - clays are finer than 0.002 mm (2 microns)
   - silts range from 0.002 to 0.02 mm (2 to 20 microns)
   - fine sands from 0.02 to 0.2 mm (20 to 200 microns)
   - coarse sands from 0.2 to 2.0 mm (200 microns to 2.0 mm).

   Most fine sands need a magnifying lens to see them.

(g) With dispersible and fine-grained soils, place far greater emphasis on erosion control measures to offset lower efficiencies achieved with sediment retention.

(h) The actual capacity of sediment retention basins is the sum of two components (Table 6.1):

  (i) A settling zone, within which water is stored allowing the settlement of suspended sediment. The settling zone is designed to capture most sediment in a nominated design rainfall event and, in turn, a specific discharge water quality.

  (ii) A sediment storage zone, where deposited sediment is stored until the basin is cleaned out – or for the life of the project where land disturbance is of a short duration (<two months).

(i) All sediment retention basins that might discharge sediment-laden stormwater more than once per year should have minimum length to width ratios of 3 to 1 to reduce short-circuiting and, preferably, at least 5 to 1. Figure 6.3 shows the influence of the ratio of the minimum flow-path length to the effective width on the apparent effectiveness of a sediment retention basin for one particular soil type. The actual effectiveness of a sediment retention basin must take into account its apparent effectiveness and the proportion of the design-size particles in the sediment load. Baffles can be employed to maximise the effective flow path within sediment basins as shown in figure 6.4.

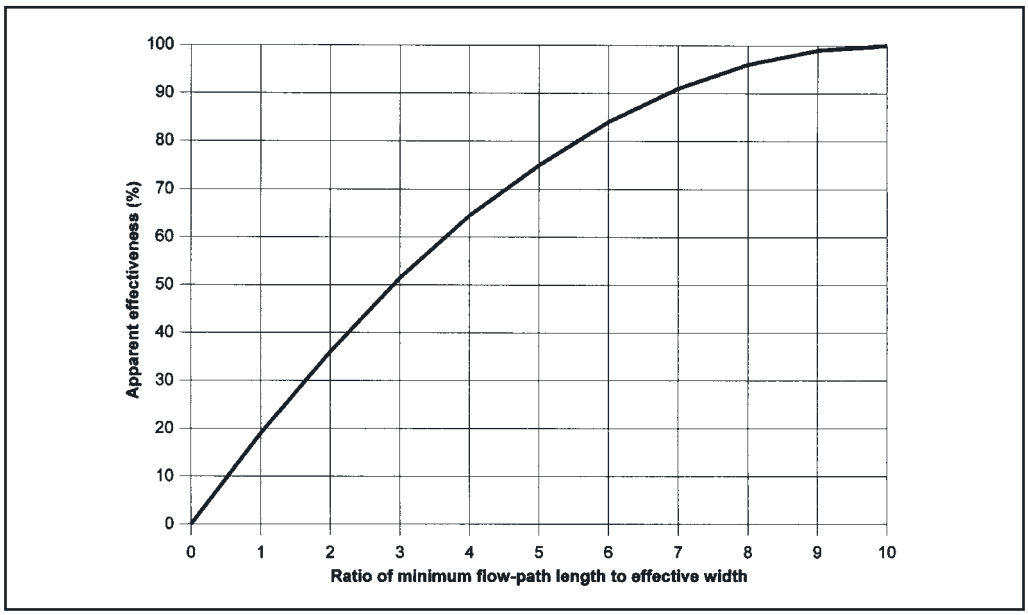

Figure 6.3 Apparent effectiveness of a sediment containment system (Fifield, 2001a)

Table 6.1 Summary of selected sediment basin types and design criteria

Soil Type	Soil characteristics	Treatment process	Basin design capacity	
			Settling zone	Sediment storage zone
Type D (dispersible)	10 percent or more of the soil materials are dispersible. Particle size is irrelevant	Aided flocculation in wet basins	Capacity to contain all runoff expected from the y percentile, x-day rainfall depth where, depending on the sensitivity of the receiving waters and/or the duration that the structure is in use: x is 2, 5, 10 or 20-days y is the 75th, 80th, 85th or 90th percentile	Normally taken as 50 percent of the capacity of the settling zone. However, it can be taken as two months soil loss as calculated by the RUSLE
Type C (coarse)	Less than 33 percent finer than 0.02 mm and less than 10 percent of the soil materials are dispersible	Rapid settling in wet or dry basins	Surface area of 4,100 m^2/m^3/sec in the 3-month ARI flow, minimum depth of 0.6m, and length:width ratio of >3:1	Normally taken as 100 percent of the capacity of the settling zone. However, it can be taken as two months soil loss as calculated by the RUSLE
Type F (fine)	33 percent or more of the particles are finer than 0.02 mm and less than 10 percent of the soil materials are dispersible	Slow settling in wet basins	Capacity to contain all runoff expected from the y percentile, x-day rainfall depth where, depending on the sensitivity of the receiving waters and/or the duration that the structure is in use: x varies between 2 and 20 days y is the 75th, 80th, 85th or 90th percentile	Normally taken as 50 percent of the capacity of the settling zone. However, it can be taken as two months soil loss as calculated by the RUSLE

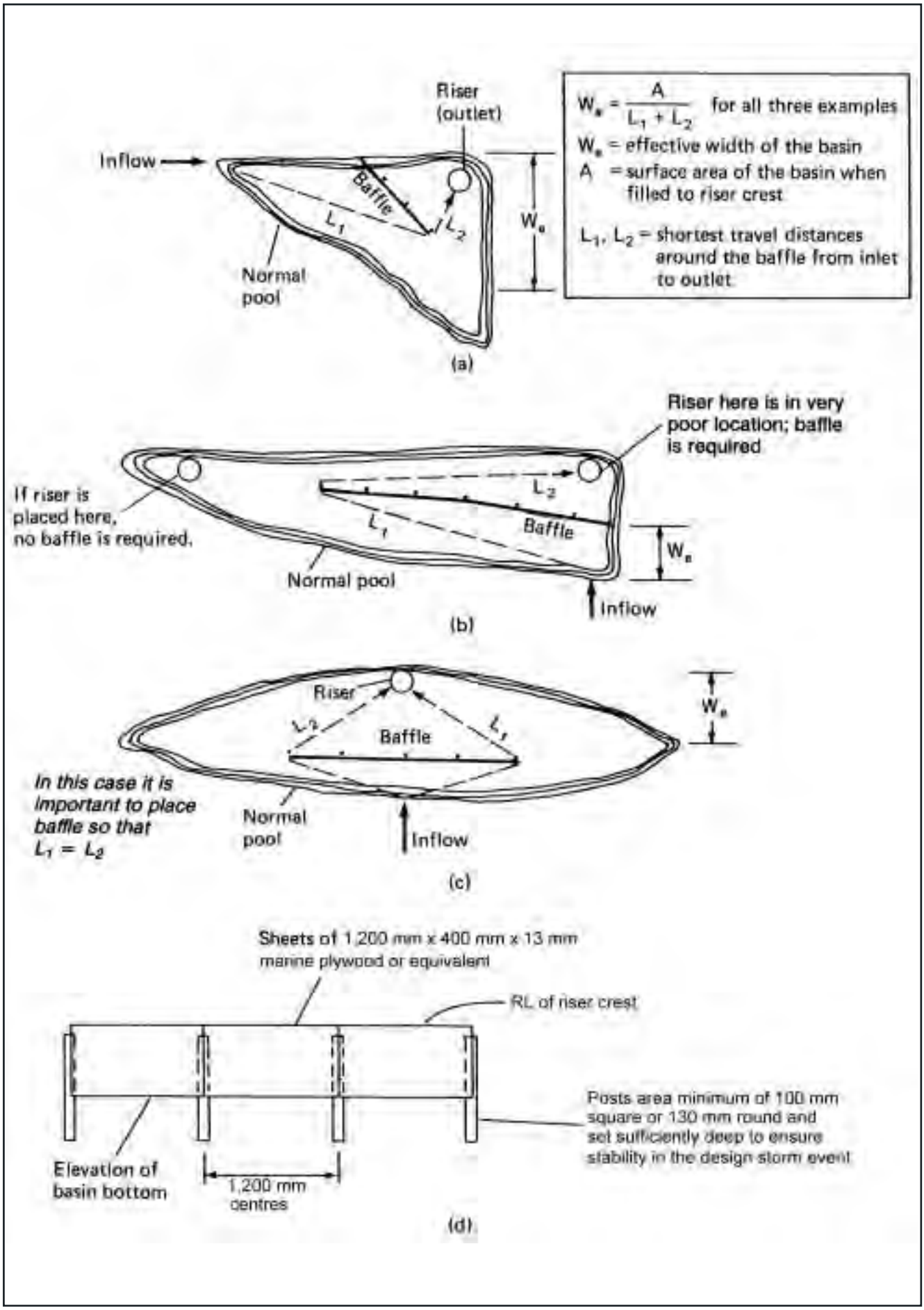

Figure 6.4 (a) to (c) – diagrammatic examples of placement of baffles in sediment basins to increase the ratio of length to width, and (d) – baffle detail, elevation (adapted from USDA, 1975)

(j) Sediment retention basins should be built to incorporate:

(i) a primary outlet designed:
- to have a capacity to pass the peak flow from the design storm event
- with an invert level at least 300 mm below any emergency outlet (where it is a separate structure);

(ii) an emergency spillway designed to have a capacity to pass the peak flow from the applicable storm event. Generally, this should be of open construction rather than a pipe outlet due to the risk of pipe blockages during high flows.[7] Nevertheless, any riser structures should be baffled or fitted with anti vortex devices;

(iii) internal batter gradients that are consistent with personal safety and, generally, within the following upper limits:
- where water depth is less than 150 mm when surcharging, 2.5(H):1(V) to 4(H):1(V) on earth structures and vertical on rock or gabion structures[8]
- where water depth is between 150 and 1,500 mm when unprotected and surcharging, a maximum slope of 5(H):1(V)[9]
- where water depth is between 150 and 1,500 mm when protected (e.g. fenced) and surcharging or greater than 1,500 mm:
  - 2.5(H):1(V) to 4(H):1(V) on earth structures[8]
  - 0.5(H):l(V) on rock gibber structures
  - 1(H):4(V) on gabion basket structures
  - 1(H): 4(V) on stacked (rough squared) rock structures;

(iv) appropriate outlet protection to ensure minimisation of scour as described in Section 5.3.3.

(k) Sediment basins can be constructed from earth, rock or suitable crushed concrete products where formed as aboveground ponds, or plastic or metal for underground tanks (see Standard Drawings SD 6-1, SD 6-2, SD 6-3, SD 6-4, SD 6-5). Choice of materials generally depends on constraints imposed by the design criteria, site conditions and local maintenance/cleaning criteria. Rock and gabion basket structures should be lined on the inside with a geotextile material (dry basins) to ensure removal of sediment particles from the system, or a suitable impermeable material for wet (*Type D* or *Type F*) basins.[10]

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7. If a piped outlet is adopted as an emergency spillway, appropriate measures should be employed to minimise the risk of blockages, and/or the pipe outlet should be significantly over designed to reduce the risk of blockage.
8. The actual gradient adopted depends on various soil characteristics.
9. The actual maximum gradient is determined by the "slipperiness" of the saturated sediment – whether or not a person can achieve a firm footing on it. Slippery sediments should have less steep gradients, in the order of 8:1 or even 10:1.
10. Geotextile can become blocked in time. So, dry basins can become wet if it is not replaced or reverse-flushed.

(l) The lower level of the settling zone should be identified with a peg or other marker that shows clearly the level above which the design capacity is available. Stored sediment should not encroach into the settling zone.

(m) Sediment removed from sediment basins should be disposed in places that will not result in a future erosion or pollution hazard (see Section 4.3.2 (h)). Note that fine and/or flocculated sediment removed from wet basins might require considerable time to dry to a level where it can be handled with relative ease.

6.3.4 Capacity of Basins for *Type D* and *Type F* Soils

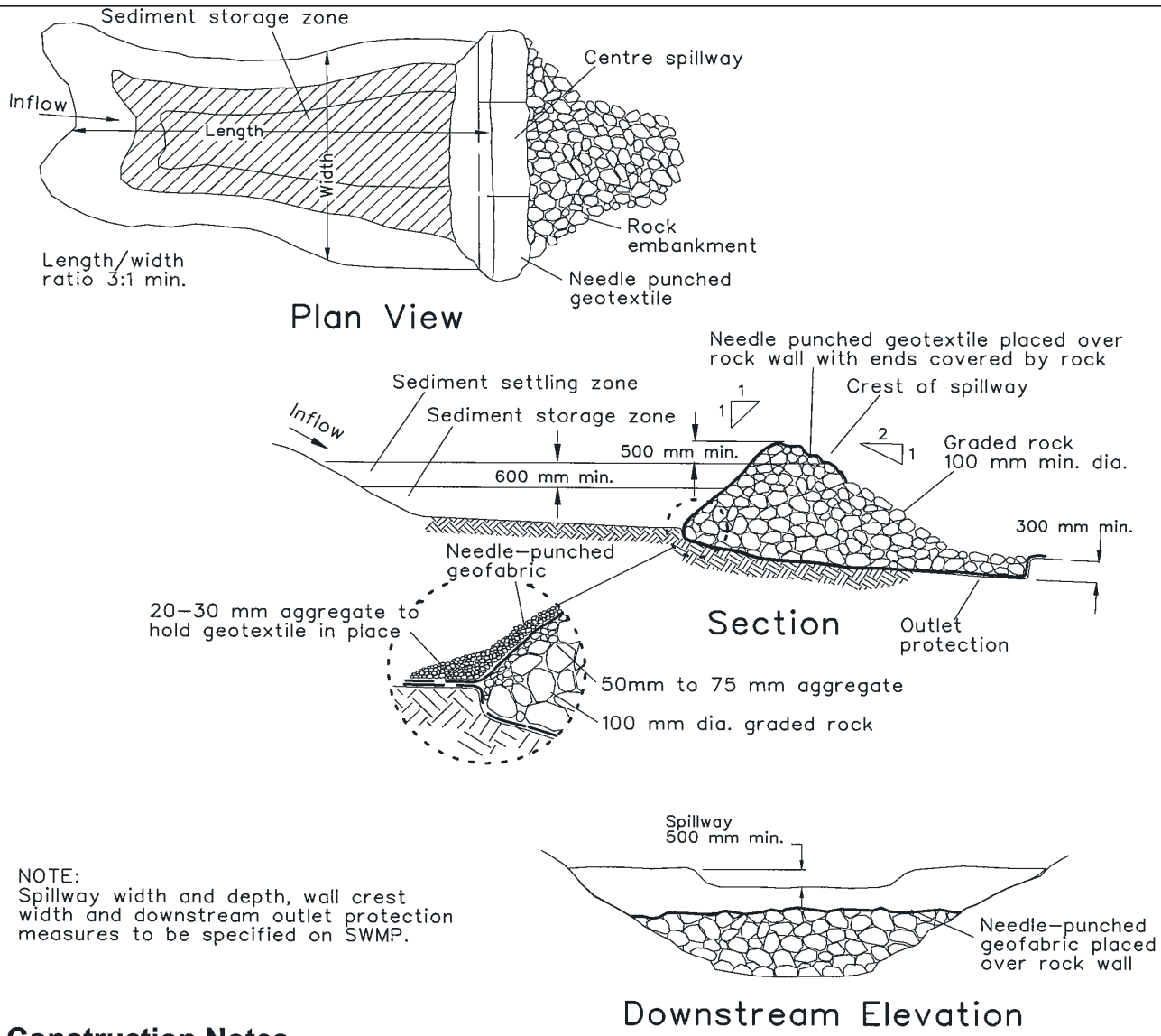
(a) Sediment retention basins for *Type D* and *Type F* soils are wet basins (SD 6-4 and SD 6-5). Their design criteria are the same. They differ only in management and, specifically, the recommended methods of dewatering and in the likely use of flocculants.

(b) The traditional approach to design of sediment retention basins is based on the settling of a design particle. However, this settling methodology is generally ineffective where the sediment contains significant quantities of fine (<0.02 mm) or dispersible materials because of very long settling times that require extraordinarily large structures and, even then, might not achieve the desired result. Both Type D and *Type F* soils are very fine and *Type D* soils are dispersible as well. So, generally, a total storm containment system is adopted here for a nominated design rainfall depth, a risk-based approach that is considerate of local daily rainfall patterns. Such basins are normally empty. They fill after rainfall events with water remaining in them long enough to be properly treated with settling agents such as gypsum (Appendix E). They are then pumped out or allowed to drain under gravity.

(c) However, other methodologies are available that enable constant flocculation of sediment-laden waters derived from *Type D* soils. One such method is described at Section E4.2 (Appendix E). Such basins do not require pumping out, so long as they can achieve an acceptable suspended solid's concentration of less than 50 milligrams per litre in the residence time provided in the design storm. Use of such alternative approaches should not vary the design capacity from that described here.

(d) A 5-day rainfall depth can be adopted as standard in the design of the settling zone where the soils being disturbed are *Type D* or *Type F*. This assumes that five days or less are required following a rainfall event to achieve effective flocculation if necessary, settling and subsequent discharge of the supernatant stormwater (Appendix E and Section 6.3.3(d)).

(e) In certain conditions, basins can be designed for rainfall depths and management periods of between 2 and 20 days, to accommodate a range of site constraints and opportunities that may be present :



NOTE:
Spillway width and depth, wall crest width and downstream outlet protection measures to be specified on SWMP.

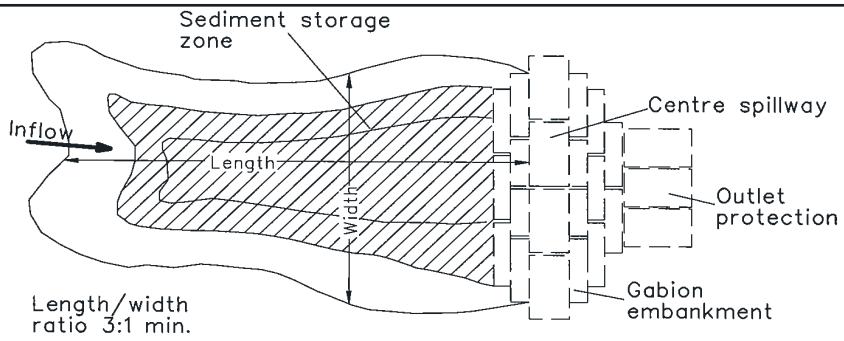
Construction Notes

1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Excavate to 300 mm depth for base of the dam wall.
3. Line the excavation with a needle-punched geotextile allowing sufficient to line below the wall, and over the upstream rock and the spillway to 500 mm below the spillway exit on the downstream face.
4. Make up the wall profile and outlet protection with100 mm (min.) diameter graded rock. Spread a layer of 50 mm to 75 mm diameter aggregate over the upstream batter for a more even surface, and add 100 mm to 150 mm of 20 mm to 30 mm gravel over the 50 mm to 75 mm diameter aggregate.
5. Lay geotextile over the upstream batter and through the spillway, fixing in place with 100 mm rock.
6. Place a "Full of Sediment" marker to show when less than design capacity occurs and sediment removal is required.
7. Replace the upstream geotextile layer each time sediment is removed

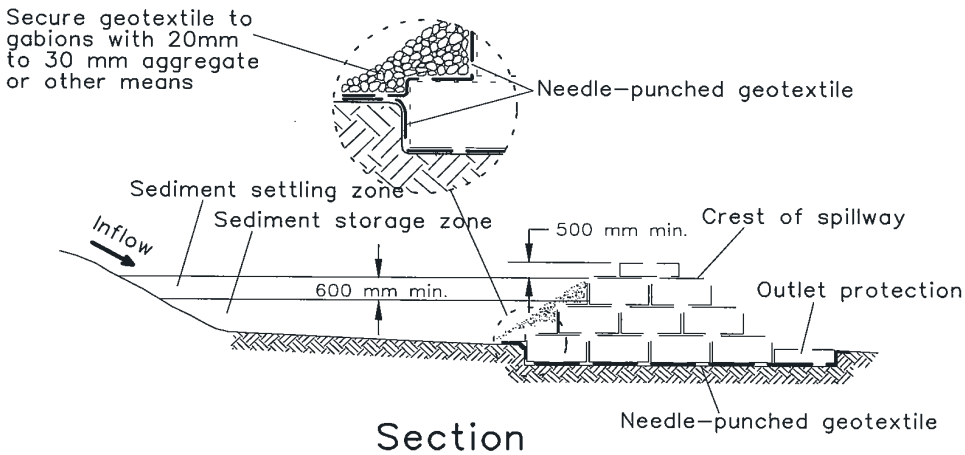
ROCK SEDIMENT BASIN

(APPLIES TO 'TYPE C' SOILS ONLY)

SD 6-1



Plan View



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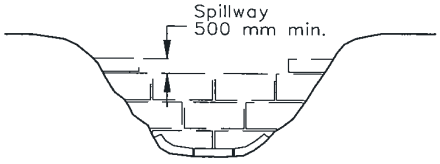


Downstream Elevation

NOTE: Spillway width and depth, wall crest width and downstream outlet protection measures to be specified on SWMP.

Construction Notes

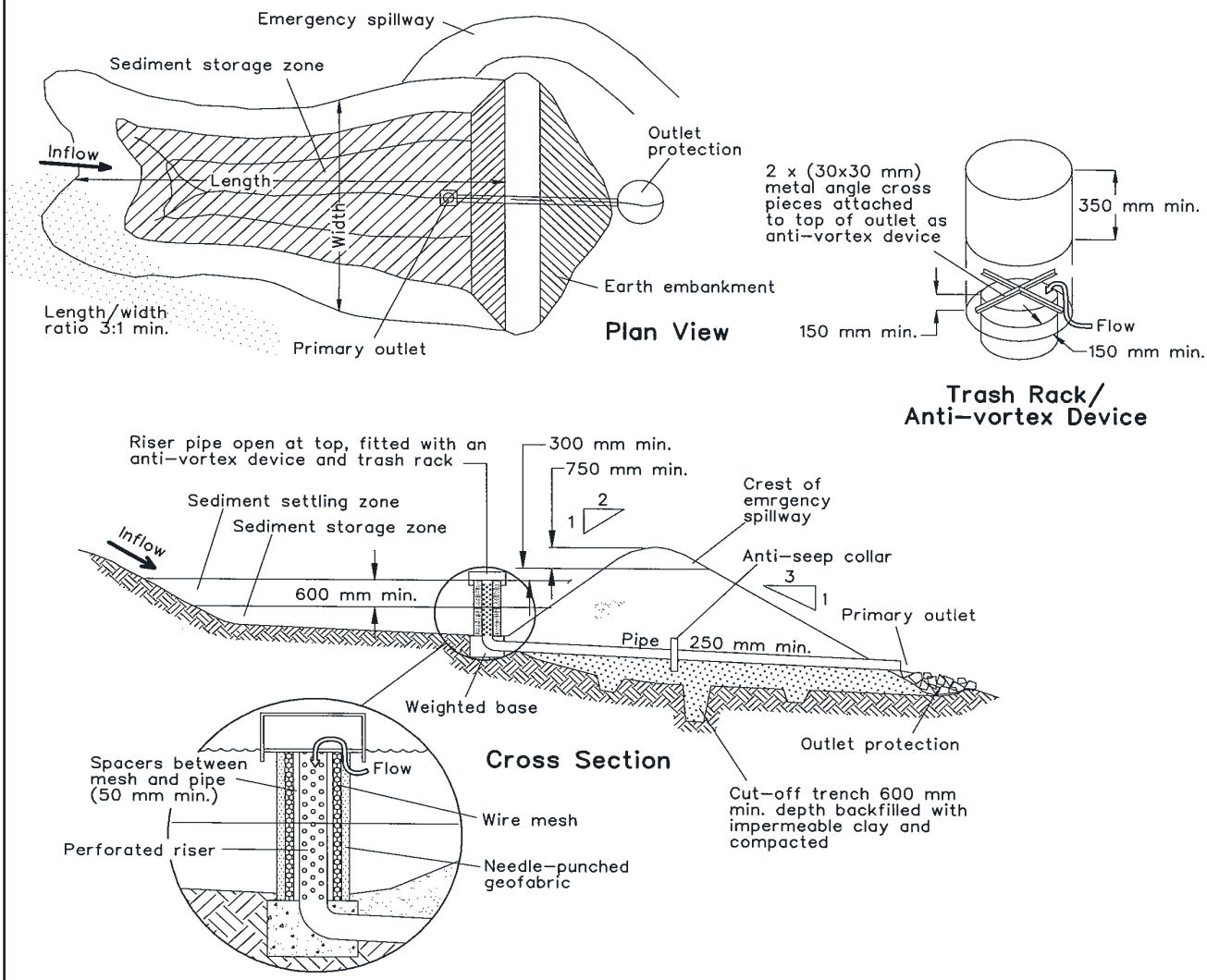
(Applies to Type C soils only)

1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Excavate to 300 mm depth for the base of the dam wall and form a level platform for the gabions.
3. Line the excavation with a needle-punched geotextile allowing sufficient to line below the wall, and over the upstream gabions and spillway to 500 mm below the spillway exit on the downstream face.
4. Make up the wall profile and outlet protection with gabion units filled with graded rock as specified on the SWMP.
5. Construct a spillway 500 mm below the crest of the dam and for the width specified on the SWMP.
6. Lap the geotextile over the upstream face and through the spillway and fix it in place with the top row of gabions.
7. Cover the upstream face of the wall with 20 mm to 30 mm gravel and geotextile (Standard Drawing 6-2b)
8. Place a "Full of Sediment' marker to show when less than design capacity occurs and sediment removal is required.
9. Replace the upstream geotextile layer when sediment is removed if a dry basin is required.

GABION SEDIMENT BASIN

(APPLIES TO 'TYPE C' SOILS ONLY)

SD 6-2



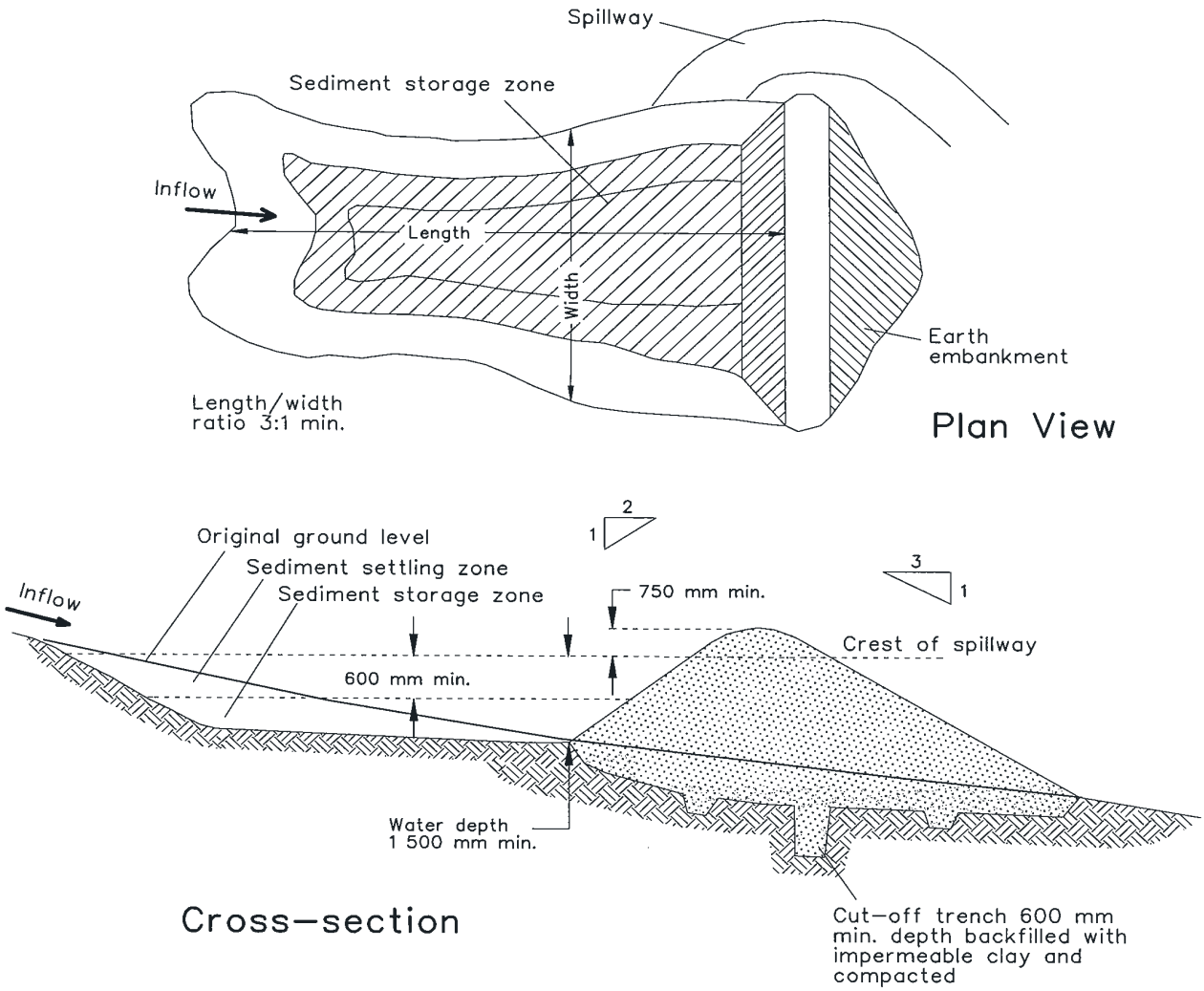
Construction Notes

1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Form a cut off trench under the centreline of the embankment 600 mm deep and 1,200 mm wide, extending to a point on the watercourse wall above the riser sill level.
3. Maintain the trench free of water and recompact the materials with equipment as specified In the SWMP to 95 per cent Standard Proctor Density.
4. Select fill according to the SWMP that is free from roots, wood, rock, large stone or foreign material.
5. Prepare the site under the embankment by ripping to at least 100 mm to help bond the compacted fill to the existing substrate.
6. Spread the fill in 100 mm to 150 mm layers and compact it at optimum moisture content following the SWMP.
7. Install the pipe outlet with seepage collars as specified in the SWMP and Standard Drawing 6-3b.
8. Form batter grades at 2(H):1(V) upstream and 3(H):1(V) downstream or as specified in the SWMP

EARTH BASIN - DRY

(APPLIES TO 'TYPE C' SOILS ONLY)

SD 6-3



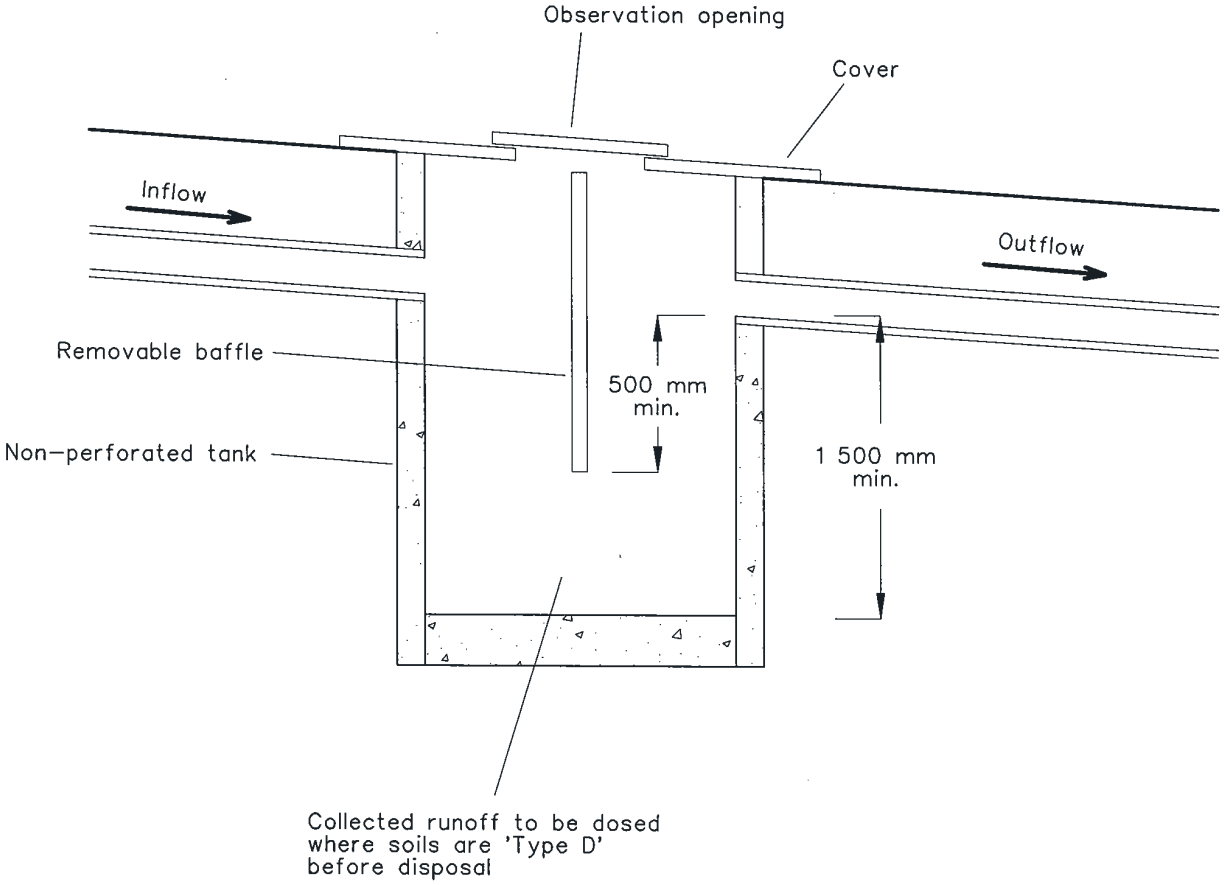
Construction Notes

1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Construct a cut-off trench 500 mm deep and 1,200 mm wide along the centreline of the embankment extending to a point on the gully wall level with the riser crest.
3. Maintain the trench free of water and recompact the materials with equipment as specified in the SWMP to 95 per cent Standard Proctor Density.
4. Select fill following the SWMP that is free of roots, wood, rock, large stone or foreign material.
5. Prepare the site under the embankment by ripping to at least 100 mm to help bond compacted fill to the existing substrate.
6. Spread the fill in 100 mm to 150 mm layers and compact it at optimum moisture content following the SWMP.
7. Construct the emergency spillway.
8. Rehabilitate the structure following the SWMP.

EARTH BASIN - WET

(APPLIES TO 'TYPE D' AND 'TYPE F' SOILS ONLY)

SD 6-4



Construction Notes

1. Join the inlet to the stormwater, taking any suitable steps to remove bulky or coarse material before it can enter the tank.
2. Connect the outlet to a safe disposal area following the SWMP.
3. Install a removable baffle, central to the inflow/outflow and normal to the direction of flow, ensuring that it reaches 500 mm below the invert of the outlet pipe.
4. Install a cover over the pit with an observation port and access cover.

LINED TANK **SD 6-5**

(i) Where the site area is insufficient to allow building structures as required for the y-percentile 5-day criterion, a 2, 3 or 4-day rainfall depth can be adopted providing flocculation, settlement and discharge can be achieved in that time. However, this will usually require the use of a special range of flocculants and specialised techniques that will achieve sufficiently fast settling (Section E4.2). Many such flocculants can cause environmental harm if not managed properly and the plans for sediment control must also include a detailed plan of management of these.

(ii) Where site conditions permit the construction of extremely large structures, a 6 to 20-day rainfall depth can be adopted. These large structures allow longer periods for reuse (e.g. dust suppression) or flocculation, settling and discharge.

(f) Unless Council's Stormwater Management Plan states differently:[11]

(i) on most sites the 75th percentile storm depth is recommended for use if the duration of disturbance is likely to be six months or less, while the 80th percentile storm depth is recommended if the duration of disturbance is likely to be more than six months;

(ii) where receiving waters are considered particularly sensitive, either by the development proponent/designer, local council or other consent authority, a higher level of protection can be provided, e.g.: the 80th percentile storm depth is recommended for use if the duration of disturbance is likely to be six months or less, while the 85th percentile storm depth is recommended if the duration of disturbance is likely to be more than six months.

Longer term land disturbances, such as waste depots, extractive sites and some road construction activities, warrant alternate levels of protection, as defined in relevant sections of Volume 2.

(g) Where space does not permit the use of structures designed for the 80th percentile or larger x-day rainfall depths and these are desirable, additional erosion controls can be considered instead, e.g. ensuring that the lands:

(i) are not in a condition of high erosion hazard during those half months when 5 percent or more of the average annual erosion index occurs (Table 6.2); or

(ii) have *C*-factors higher than 0.1 only when the 3-day forecast suggests that rain is unlikely.[12] In this case, management regimes should be established that facilitate rehabilitation within 24 hours should the forecast prove incorrect.

11. Note that increasing the design criteria from the 75th percentile, 5-day depth to the 90th percentile, 5-day depth more than doubles the size of the settling zone and sometimes triples it.
12. *C*-factors of 0.1 can be achieved in various ways as shown at Appendix A, note especially figure A5, Table A3 and Table A4. For example, figure A5 shows that a C -factor of 0.1 can be achieved with a 60 percent grass cover where, previously, the soils were stripped or deeply cultivated; alternately, Table A3 shows it can be achieved temporarily by application of a hydraulic soil stabiliser.

(h) Figure 6.5 shows the y-percentile 2, 5, 10 and 20-day rainfall depths (mm) for Sydney's Observatory Hill, while Tables 6.3a and 6.3b shows the 75th, 80th 85th, 90th and 95th percentile 2, 5, 10 and 20-day rainfall depths for 58 sites throughout New South Wales. Similar graphs to figure 6.5 are shown for 57 other sites throughout New South Wales at Appendix L. Rainfall depths at locations not shown, or for time periods not shown (between 2 and 20 days) can be estimated by interpolation or from graphs of rainfall depth estimated from the annual mean rainfall, whichever is the most conservative. Estimation of the 75th, 85th and 95th percentile 5-day rainfall depth from annual mean rainfall is shown in figure 6.6 and also at Appendix L for other locations and situations. Rainfall depths smaller than the 75th percentile depth are shown in figures 6.5 and 6.6 and at Appendix L for illustration purposes only and should not be used in design. Note that rainfall events smaller than 0.2 mm have been omitted in the calculations of all graphs.

(i) Normally, sediment basins where the soils are *Type D* or *Type F* are sized as follows:

V = settling zone + sediment storage zone (Table 6.1)

(i) The settling zone capacity designed to capture *Type D* and *Type F* soils can be determined from the y-percentile, 5-day rainfall depth, i.e.

$$\text{Settling Zone}_{\textit{Type D/F}} = 10 \times C_v \times A \times R_{(y\ \%ile,\ 5\ day)}$$

where:

- 10 is a unit conversion factor
- C_v is a volumetric runoff coefficient, defined as that proportion of rainfall that runs off as stormwater[13]
- A is the catchment area of the basin (hectares)
- $R_{(y\ \%ile,\ 5\ day)}$ is the 5-day total rainfall depth (mm) that is not exceeded in y percent of rainfall events. This figure can be determined from Appendix L. Rainfall depths corresponding to management periods more and less than 5 days can be adopted, as site characteristics allow and as detailed previously

The volumetric runoff coefficient should be derived from Appendix F.

(ii) On lands of low erosion hazard (determined through the simple procedure described in Section 4.4.1) , the capacity of the sediment storage zones on *Type D* and *Type F* soils can be determined as either:

- 50 percent of the settling zone capacity, or
- two months soil loss as calculated with the RUSLE

13. This figure differs from the peak flow runoff coefficient used in the determination of peak flows according to Pilgrim (1998) (Appendix F). The volumetric coefficient of runoff is used for calculations for the sizing of sediment basins on Type D and Type F soils only.

Table 6.2 Percentage of average annual EI that normally occurs in the first and second half of each month for each Rainfall Zone (figure 4.9) (Rosewell and Turner, 1992)

Zone	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
1	6	6	7	8	8	8	6	5	5	4	3	2	2	2	2	2	2	2	2	3	3	4	4	4
2	10	9	9	8	7	5	2	2	1	1	2	1	1	1	1	1	3	3	3	4	5	6	7	8
3	6	8	9	9	10	7	7	4	2	2	2	2	2	1	0	1	2	2	2	3	3	4	6	6
4	6	6	8	8	8	5	5	3	3	2	2	2	2	3	3	2	2	3	3	3	5	5	5	6
5	2	3	7	13	13	10	11	6	3	2	3	2	2	2	1	1	1	3	3	3	3	2	2	2
6	11	10	10	9	6	5	2	2	2	1	1	1	1	1	1	1	2	2	4	3	5	5	8	7
7	9	9	7	8	4	5	3	3	2	3	2	1	2	1	2	2	2	3	4	4	4	6	7	7
8	7	8	7	8	5	6	4	3	2	2	2	1	2	1	2	2	2	2	4	4	6	6	7	7
9	8	9	8	7	6	5	3	3	2	2	1	2	1	1	1	2	3	3	5	5	5	6	6	6
10	7	6	9	7	7	6	4	4	3	2	1	1	2	1	1	2	2	3	4	5	6	6	5	6
11	10	11	11	9	10	5	3	1	1	1	1	1	1	1	2	2	1	2	2	5	6	6	6	6
12	10	9	8	7	5	4	4	2	2	1	1	2	1	1	1	2	3	4	3	4	4	6	7	9

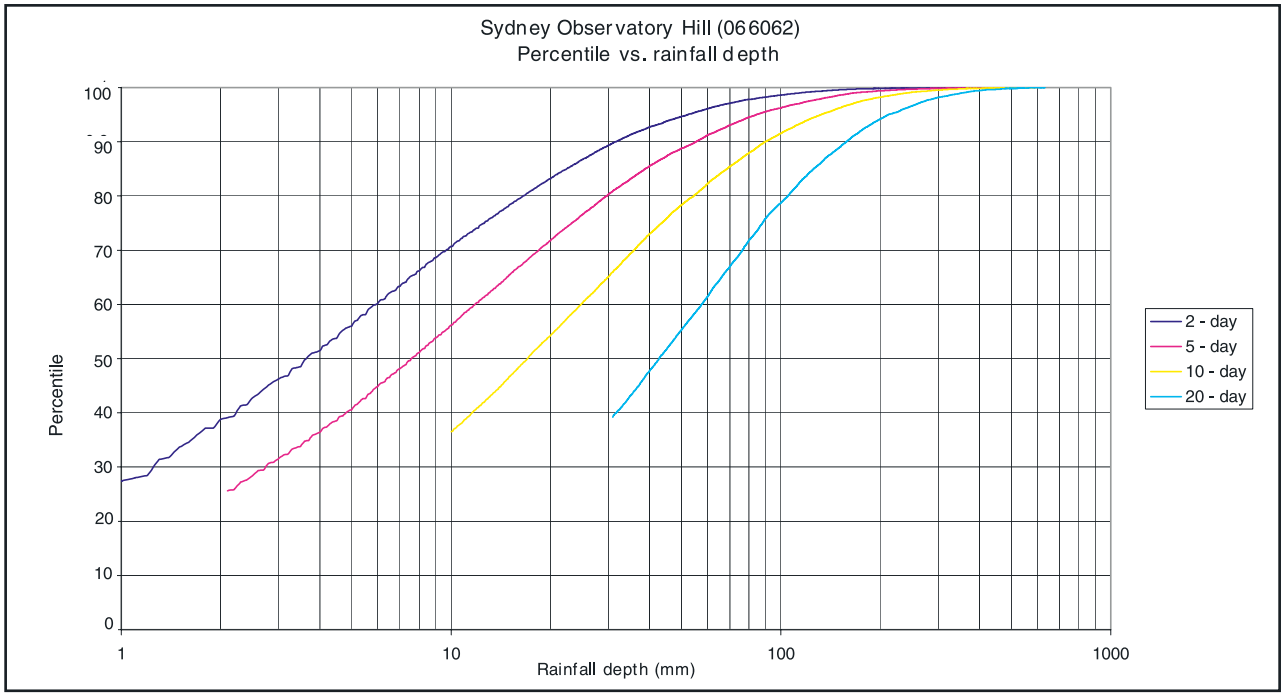


Figure 6.5 Y-percentile 2, 5, 10 and 20-day rainfall depths at Sydney's Observatory Hill

Table 6.3a 75th, 80th, 85th, 90th and 95th-percentile 2 and 5-day rainfall depths for 59 sites in New South Wales

Location	2-day rainfall depths (mm)					5-day rainfall depths (mm)				
	75th %ile	80th %ile	85th %ile	90th %ile	95th %ile	75th %ile	80th %ile	85th %ile	90th %ile	95th %ile
North Coast										
Coffs Harbour	18.3	23.6	31.8	44.4	70.8	33.6	42.7	55.8	74.9	117.6
Dorrigo	22.1	27.9	36.4	49.0	77.0	40.3	49.3	63.7	84.8	132.0
Grafton	14.0	17.8	22.9	31.2	48.9	23.3	29.0	37.2	50.1	75.4
Lismore	16.3	20.6	26.4	36.3	57.0	28.6	35.3	45.2	60.2	95.3
Port Macquarie	18.0	22.9	29.8	41.4	65.3	32.0	40.1	51.8	70.0	106.2
Taree	15.0	19.0	24.9	35.5	56.4	25.0	31.7	41.2	55.9	90.6
Tweed Heads	23.4	29.5	37.6	50.8	78.7	39.6	48.5	62.5	82.5	126.8
Central Coast/Hunter										
Cessnock	13.4	16.5	21.1	28.5	45.0	20.3	24.4	31.0	42.8	63.0
Gosford (Narara)	16.7	21.3	28.4	39.8	63.0	27.9	35.0	45.8	62.2	99.3
Nelson Bay	17.5	22.3	28.9	39.4	58.9	30.4	38.1	48.3	63.5	91.5
Newcastle	13.7	17.6	23.0	31.8	48.1	24.4	30.5	38.9	51.8	76.7
Scone	12.4	15.3	19.3	25.0	37.8	19.0	22.6	27.7	35.9	51.3
Wyong	16.8	20.8	26.9	37.2	58.8	26.8	33.8	43.2	58.7	90.1
Sydney/Blue Mountains										
Bankstown	11.4	14.5	19.6	27.0	42.0	19.4	24.4	31.5	42.6	66.6
Blacktown	12.0	15.0	20.3	28.0	43.6	19.0	24.6	32.2	43.2	70.8
Camden	13.6	16.8	21.6	29.2	44.8	20.2	25.1	32.0	43.4	66.3
Campbelltown	12.2	15.2	19.0	26.9	42.1	19.3	23.9	30.6	43.2	63.3
Hornsby	15.7	20.6	27.4	38.1	61.0	25.9	32.8	43.3	60.0	92.5
Katoomba	16.5	20.6	26.7	37.6	60.2	28.0	35.2	45.4	63.0	99.6
Lithgow	11.4	14.0	18.3	24.2	35.3	19.5	23.6	29.4	37.8	56.4
Liverpool	12.2	15.5	20.0	28.4	43.2	19.2	24.4	32.2	43.8	70.2
Mona Vale	19.0	23.6	29.2	38.7	62.0	29.0	35.2	44.0	61.2	92.0
Mosman	15.2	19.3	25.4	35.8	57.7	26.2	32.9	43.2	59.6	91.5
Parramatta North	11.7	15.2	20.6	28.2	45.5	20.3	25.8	33.1	45.8	74.1
Penrith	14.0	18.2	23.6	31.5	49.5	21.8	27.4	35.0	47.6	74.6
Richmond	10.2	13.5	18.0	24.9	39.2	17.5	22.4	29.5	39.7	61.4
Ryde	14.7	18.3	24.9	34.3	53.5	23.4	29.5	38.8	53.6	80.5
Springwood	15.5	20.1	25.9	35.0	55.6	25.2	31.4	40.4	55.0	84.1
Sutherland	15.0	18.8	24.9	34.8	55.0	23.4	29.7	38.9	54.6	85.1
Sydney 12.7		16.6	22.4	31.6	52.1	23.3	29.7	38.8	55.2	84.3
Wallacia	14.0	17.8	23.0	31.4	48.8	22.1	27.6	36.6	48.8	76.2
Wilberforce	11.4	14.9	19.8	27.7	46.4	19.8	24.6	33.2	46.7	69.4
Illawarra/South Coast										
Albion Park	16.5	21.1	27.9	39.1	67.4	25.2	31.8	41.9	59.8	101.2
Batemans Bay	13.7	17.8	24.1	34.2	54.9	22.1	28.0	37.4	52.4	84.4
Bega	12.6	16.1	21.3	30.5	51.1	19.5	24.6	32.5	46.2	77.2
Cooma	7.6	9.8	13.0	17.8	27.2	12.5	15.8	20.0	25.8	39.1
Helensburgh	23.1	28.7	38.1	53.0	81.3	35.6	45.0	57.4	78.2	124.6
Kiama	14.7	19.1	24.9	35.5	57.2	25.5	32.2	42.1	58.3	90.7
Kangaroo Valley	16.8	21.4	29.2	41.7	70.6	26.8	34.2	45.7	67.0	115.6
Mittagong	14.7	18.3	23.4	31.8	49.1	22.9	28.0	36.2	49.0	75.2
Robertson	15.8	20.3	27.9	38.2	67.3	28.4	36.0	46.1	67.3	113.0
Wollongong	13.8	18.0	24.8	36.6	61.3	25.4	33.0	43.5	60.8	95.6
Northern Tablelands and Northwestern Slopes										
Armidale	12.4	15.2	19.3	25.0	35.3	19.8	24.1	29.2	37.4	52.9
Gunnedah	14.2	17.3	21.3	27.7	39.2	20.0	24.1	30.2	38.4	53.0
Tamworth	15.2	18.3	22.2	27.7	39.6	21.6	25.2	30.8	39.2	54.2
Tenterfield	18.8	22.3	26.7	33.8	46.0	26.7	31.4	38.1	47.4	63.3
Central Tablelands and Central Western Slopes										
Bathurst	10.7	13.2	16.5	21.4	30.4	16.8	20.6	24.9	31.4	43.7
Cowra	12.0	14.7	18.0	22.9	32.8	18.1	21.6	26.1	32.5	44.9
Dubbo	12.7	16.0	20.2	26.1	36.0	18.8	22.8	28.4	35.6	50.7
Southern Tablelands and Southwestern Slopes										
Albury	11.8	14.4	17.4	22.4	31.6	20.0	23.7	28.4	35.2	45.2
Goulburn	7.8	10.0	13.2	18.0	27.4	14.2	17.8	22.2	28.6	40.8
Jindabyne	11.9	14.2	17.3	22.6	33.4	17.3	20.6	24.9	32.0	46.8
Queanbeyan	12.7	15.2	18.8	24.2	34.3	18.0	21.3	25.8	33.0	45.1
Wagga	9.2	11.4	14.4	19.3	27.6	15.6	18.8	23.4	29.4	40.2
Northwestern, Southwestern and Far Western Plains										
Bourke	11.7	14.6	18.3	24.8	35.6	15.3	19.0	23.9	30.9	44.5
Broken Hill	7.1	9.1	12.0	16.8	25.9	9.7	12.2	16.2	21.6	33.0
Griffith	9.5	11.7	14.0	18.5	26.2	13.8	16.4	20.6	25.4	34.6
Moree	12.6	15.8	19.3	25.1	36.8	18.0	21.9	26.8	36.3	51.4
Nyngan	12.2	15.2	19.1	25.6	37.3	16.5	20.4	25.8	33.8	47.8

Table 6.3b 75th, 80th, 85th, 90th and 95th-percentile 10 and 20-day rainfall depths for 59 sites in New South Wales

Location	10-day rainfall depths (mm)					20-day rainfall depths (mm)				
	75th %ile	80th %ile	85th %ile	90th %ile	95th %ile	75th %ile	80th %ile	85th %ile	90th %ile	95th %ile
North Coast										
Coffs Harbour	62.2	75.0	94.0	125.9	181.6	127.0	148.7	174.6	215.0	281.6
Dorrigo	71.2	87.5	108.8	141.4	213.1	142.2	169.1	203.5	257.8	366.2
Grafton	39.4	48.6	60.2	78.3	112.8	76.2	88.9	106.4	130.5	175.2
Lismore	49.8	60.2	75.3	100.4	148.1	98.0	115.6	138.2	176.2	242.0
Port Macquarie	57.9	70.6	88.4	115.0	159.9	116.6	135.4	158.6	193.0	249.0
Taree	43.5	53.5	68.0	91.8	135.8	85.6	101.6	124.6	157.7	207.0
Tweed Heads	67.0	81.0	99.3	130.8	186.8	124.6	147.0	178.6	219.2	288.5
Central Coast/Hunter										
Cessnock	31.0	38.3	48.3	62.3	87.3	57.0	67.0	80.1	99.0	133.4
Gosford (Narara)	49.2	59.7	76.5	100.7	148.6	96.1	113.4	137.0	173.4	239.2
Nelson Bay	53.3	63.8	77.7	99.2	136.7	100.2	117.0	135.2	165.4	219.0
Newcastle	43.9	52.8	64.6	83.3	113.6	85.6	98.6	115.3	139.5	182.4
Scone	28.7	33.9	41.2	52.0	70.6	50.6	57.9	67.7	82.8	109.2
Wyong	45.2	55.4	69.4	89.2	130.9	85.8	100.2	119.9	150.9	208.2
Sydney/Blue Mountains										
Bankstown	33.0	41.4	52.6	69.2	99.5	66.0	80.6	96.0	116.4	161.0
Blacktown	32.6	40.4	51.2	70.2	102.8	64.8	76.2	94.4	117.7	159.4
Camden	31.0	38.2	48.6	63.8	95.0	57.4	67.6	82.7	104.9	143.7
Campbelltown	32.0	39.2	49.9	64.9	100.3	61.6	71.1	87.4	118.7	149.9
Hornsby	44.4	54.9	71.1	91.9	139.4	86.2	100.8	122.8	156.7	214.9
Katoomba	50.1	62.2	78.4	103.8	157.6	101.6	121.4	146.4	183.4	260.0
Lithgow	32.9	38.9	47.5	60.7	84.4	63.9	74.0	86.6	104.4	134.3
Liverpool	33.2	41.0	52.4	70.4	102.0	66.4	79.0	95.8	118.6	156.8
Mona Vale	45.8	56.6	71.2	91.8	129.2	87.1	100.6	120.0	150.1	198.4
Mosman	47.0	57.5	72.8	95.8	137.4	93.2	110.2	131.0	160.9	218.6
Parramatta North	35.4	44.2	56.1	76.4	112.3	70.6	87.0	103.2	131.6	178.5
Penrith	33.8	41.7	52.9	71.4	104.9	61.7	74.1	91.3	118.4	160.4
Richmond	30.7	37.4	47.5	63.4	92.4	59.5	71.1	86.5	108.5	146.9
Ryde	38.4	48.0	61.4	80.6	116.8	72.6	87.0	105.4	130.3	185.3
Springwood	41.4	50.8	63.4	84.8	130.0	77.8	93.4	115.6	148.0	206.1
Sutherland	39.1	48.9	63.0	83.6	124.3	75.9	90.2	109.2	139.7	197.0
Sydney 43.6		54.5	68.6	89.5	132.3	88.0	105.0	125.9	158.1	211.2
Wallacia	35.6	43.6	55.4	75.4	113.1	66.4	81.1	98.7	125.8	173.5
Wilberforce	34.6	43.4	54.6	71.2	107.9	68.6	80.7	96.8	120.6	182.0
Illawarra/South Coast										
Albion Park	41.0	51.7	66.1	93.3	147.8	77.1	95.6	120.6	158.0	226.2
Batemans Bay	37.4	47.3	59.7	81.3	124.8	72.0	87.6	107.5	135.7	187.7
Bega	31.8	39.6	51.6	72.4	111.6	61.4	74.8	93.0	119.1	178.9
Cooma	21.2	25.0	31.0	40.4	59.2	40.6	48.0	57.4	72.2	92.4
Helensburgh	58.2	71.5	89.2	121.7	178.4	105.9	126.1	153.8	200.2	291.1
Kiama	46.0	56.0	71.6	93.1	136.5	90.7	106.7	130.1	161.3	220.7
Kangaroo Valley	45.7	58.8	76.4	107.5	166.4	92.8	112.8	141.3	181.6	254.5
Mittagong	37.1	45.1	56.4	74.6	110.4	69.2	82.1	99.6	122.8	164.6
Robertson	52.2	63.8	101.8	116.2	190.6	108.8	133.3	166.2	217.5	310.7
Wollongong	48.1	58.6	75.2	99.2	150.4	96.2	115.4	138.7	176.4	252.2
Northern Tablelands and Northwestern Slopes										
Armidale	32.7	38.3	45.7	56.8	76.5	60.5	68.0	79.2	93.9	119.5
Gunnedah	29.7	35.1	42.2	52.5	69.6	50.2	57.6	66.7	80.1	102.9
Tamworth	31.6	37.3	44.4	54.4	73.0	53.9	61.8	70.8	84.2	107.2
Tenterfield	39.6	46.1	54.4	66.0	88.6	67.6	76.5	89.4	105.4	128.0
Central Tablelands and Central Western Slopes										
Bathurst	27.2	31.6	37.8	46.3	60.7	49.5	55.7	63.4	74.0	94.3
Cowra	28.0	32.2	38.1	46.8	62.2	48.7	55.4	63.6	74.2	93.8
Dubbo	28.4	33.2	40.0	50.5	66.6	47.5	54.4	64.0	77.0	98.7
Southern Tablelands and Southwestern Slopes										
Albury	32.8	38.6	44.0	52.4	66.1	60.5	66.5	74.4	85.7	102.4
Goulburn	26.4	30.2	36.4	44.8	60.8	49.0	54.8	64.3	75.6	97.1
Jindabyne	26.4	31.2	37.6	47.8	64.3	48.2	55.4	64.7	76.7	96.4
Queanbeyan	26.9	31.5	37.6	45.8	62.3	47.0	53.0	61.6	73.7	93.2
Wagga	26.0	30.2	36.0	43.6	56.8	46.4	52.6	59.8	70.4	86.2
Northwestern, Southwestern and Far Western Plains										
Bourke	20.4	25.2	30.6	39.9	56.8	31.2	37.1	44.8	56.5	79.2
Broken Hill	13.4	16.8	21.4	28.9	41.4	21.8	26.7	32.4	40.6	59.7
Griffith	21.0	24.4	28.4	35.3	46.6	34.4	38.8	45.4	53.6	67.4
Moree	26.4	31.8	39.1	50.6	70.0	46.0	53.4	63.3	78.0	104.1
Nyngan	23.1	27.9	34.8	44.8	61.2	36.6	43.6	52.8	66.3	90.4

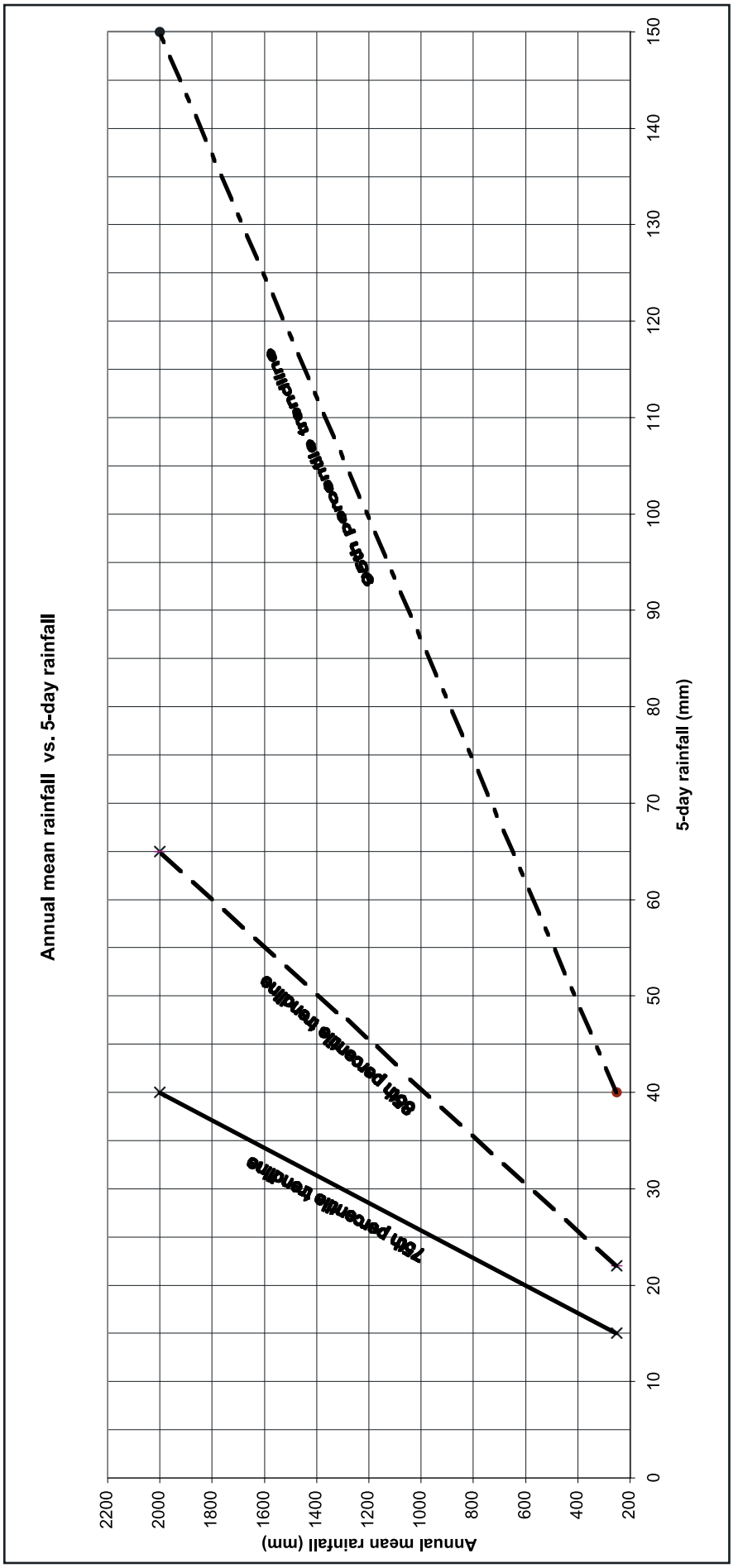


Figure 6.6 The 75th, 85th and 95th percentile 5-day rainfall depth estimated from the annual mean rainfall

On lands of high erosion hazard (typically Soil Loss Classes 5, 6 and 7), designers should always derive a more specific capacity based on two month soil loss as calculated with RUSLE, the following equation (Appendix A):

$$\text{Sediment Zone}_{\textit{Type F / Type D}} = \frac{0.17 \times A\,(R \times K \times LS \times 1.3 \times 1.0)}{1.3}$$

where:

0.17 = one sixth of the computed average annual soil loss

1.3 = the bulk density of the deposited sediment

A = the disturbed catchment area (hectares)

R and K are the RUSLE factors for the site

LS is the RUSLE factor for the site assuming an 80-metre slope length (other slope lengths can be chosen but should be properly justified in erosion control plans).

(iii) In cases where these criteria yield excessively large sediment storage zones, the application of one or more of the following options can help reduce their sizes:

- reducing the catchment areas
- reducing effective slope lengths
- increasing the frequencies of sediment removal.

Standard Worksheets for calculating the size of sediment basins on *Type F* and *Type D* soils are provided in Appendix J.

(j) Management of Sediment Basins on *Type D* and *Type F* Soils:

(i) With basins that capture runoff from *Type F* soils, stormwater in the settling zone should be drained or pumped out within that time period adopted in the design of the basin (5 days in most cases, but in the range of 2-20 days as site conditions allow) following rainfall if the nominated water quality targets can be met. Flocculation should be employed where extended settling is likely to fail to meet this objective within the nominated time period.

(ii) Because *Type D* soils contain a significant level of dispersible materials, dosing the captured stormwater with a chemical agent to facilitate settling and help manage the turbidity of discharged stormwater is necessary (Appendix E). For larger land disturbance activities, consideration should be given to establishing a site-specific relationship between suspended solids concentration (also reported as mg/L non-filtrable residue (NFR) and turbidity (measured in nephelometric turbidity units (NTU)) to allow a more rapid assessment of stormwater quality at the site. Samples collected for this purpose should be taken following a reasonable settling period.[14]

14. Most Australian streams naturally carry sediment loads at some time or another and have reached equilibrium under such conditions. Excessively reducing these loads for extended periods can cause such streams to become "hungry" and erode their own bed and banks.

(iii) Ensure only the clear (<50 mg/L suspended solids) supernatant waters are discharged from the settling zones of these structures. To help in this, use a floating inlet to any pump to reduce the opportunity for picking up any settled sediment

(iv) Sediment removed from sediment storage zones where the soils are *Types D* or *Type F* often requires a long time to dry out before it can be handled properly. Consideration should be given to this matter well before maintenance is required. Sediment must be stored, even temporarily, in ways that will not result in sediment pollution to downslope lands and waterways.

6.3.5 Capacity of Basins for *Type C* Soils

(a) Sediment retention basins on *Type C* soils can be wet or dry basins (SD 6-1, SD 6-2, SD 6-3, SD 6-4 and SD 6-5).

(b) The basic premise of sediment retention basins on *Type C* soils is that an acceptable discharge water quality can be achieved by providing a relatively short residence time for the settling of a design particle (usually 0.02 mm) (Table 6.1).

(c) The design storm event for basins on *Type C* soils is taken as the 3-month ARI flow, unless specified differently in the local Council's "Stormwater Management Plan". This design flow should be estimated for individual basin designs, but is commonly about half of the 1-year ARI flow unless the local consent authority specifies differently.[15]

(d) In determining peak rates of flow, the minimum critical duration (or time of concentration (tc)) likely to apply throughout the construction period should be adopted. Adopt the recommendations shown at Appendix F for calculation of peak flow runoff coefficients (C10) where the lands are disturbed by removal of vegetation and topsoil (common on building and road construction sites and mining sites). Where the lands are not so disturbed, apply the criteria shown in Pilgrim (1998).

(e) Three components need to be determined for the settling zone of a sediment basin on *Type C* soils, namely: the surface area, depth, and length:width ratio.[16]

(i) The basin surface area should be equal to or greater than the following:

- 4,100 square metres per cubic metre of discharge waters per second in the design storm event where the design particle is 0.02 mm[17]

15. Generally, more than 90 percent of average annual runoff occurs as flows with an ARI of three months or less.
16. Most laboratory studies that have investigated sediment basin design have occurred in environments where such factors as short-circuiting, turbulence, bottom scour, outlet design and temperature had minimal if any effect on their efficiencies. The reality is such an ideal basin is never constructed, despite very good intentions. Further, the particles being tested are usually perfectly spherical, have uniform densities and cannot interact with one another, factors that do not occur with real soils.
17. A basin surface area of 4,100 square metres is based on the equation A = 1.2 Q / Vs where A is the required basin surface area (m^2), Q is the peak flow rate in the design storm (m^3/sec) and Vs is the settling velocity of the design particle (0.00029 m/s for a particle of 0.02 mm diameter (Goldman *et al* (1986)).

- 635 square metres per cubic metre of discharge waters per second where it is 0.05 mm
- 170 square metres per cubic metre of discharge waters per second where it is 0.1 mm.

In most cases, the design particle should be taken as 0.02 mm. However, the larger sizes can be considered where at least 90 percent of those particles coarser than 0.02 mm are, in fact, coarser than 0.05 or 0.1 mm.

(ii) The depth of the settling zone should be at least 0.6 metres, sufficient to provide a cross-sectional flow area that limits flow velocities to values unlikely to scour settled sediment in a 1-year ARI flow, namely 0.07 metres per second for a particle of 0.02 mm diameter. If a less frequent storm event has been adopted (greater than the 1-year ARI) or if site constraints limit the depth of the sediment retention basin, a check should be made to ensure that the average flow velocity in the design storm event does not exceed the scour velocity for a particle of 0.02 mm diameter.[18]

(iii) Length:width ratios should be 3 to 1 or greater as discussed above at Section 6.3.3(i).

(iv) On lands of low erosion hazard, as determined by the simple procedure described in Section 4.4.1, the capacity of the sediment storage zones on Type C soils can be determined simply as 100 percent of the settling zone capacity. On lands of high erosion risk (typically Soil Loss Classes 5, 6 and 7), or as an alternative in any case, designers can derive a more specific capacity using the following equation (Appendix A):

$$\text{Sediment Zone}_{\textit{Type F / Type D}} = \frac{0.17 \times A\ (R \times K \times LS \times 1.3 \times 1.0)}{1.3}$$

where:

0.17 = one sixth of the computed average annual soil loss

1.3 = the bulk density of the deposited sediment

A = the disturbed catchment area (hectares)

R and K are the RUSLE factors for the site

LS is the RUSLE factor for the site assuming an 80-metre slope length (other slope lengths can be chosen but should be properly justified in erosion control plans).

(v) On Soil Loss Classes 5, 6 and 7 lands, designers should derive the specific capacity using the above equation only.

(vi) In cases where these criteria yield excessively large sediment storage zones, the application of one or more of the following options can help reduce their sizes:

- reducing the catchment areas

18. Metcalf and Eddy (1991) suggest a scour velocity of 0.07 m/s for a particle of 0.02 mm diameter.

- reducing effective slope lengths
- increasing the frequencies of sediment removal.

Standard Worksheets for calculating the size of sediment basins on *Type F* and *Type D* soils are provided in Appendix J.

(f) Techniques for dewatering *Type C* sediment basins commonly involve the use of needle-punched geotextile, sand or gravel as mediums near the outlet. The use of sand or gravel as a filtering medium is not encouraged because it is more difficult to maintain. Geotextile should be placed:

(i) on the upstream side of gabions (figure 6.7);

(ii) on 50 to 75 mm aggregate (maximum batter gradient 1.5(H):1(V)) placed on the upstream side of a wall constructed from local rock materials (figure 6.8); or

(iii) around a perforated riser structure. An air gap is essential between the riser structure and the geotextile to ensure free drainage of "dry" basins. The geotextile should not be in close contact with the riser (SD 6-3).

(g) Whichever method is used, reverse flush or replace the geotextile each time sediment is removed from the basin to reduce the likelihood of the pores blocking and becoming essentially a wet basin. Consequently, do not sandwich the fabric between gabion baskets.

(h) Operation of basins on *Type C* soils should ensure that, where possible, water has drained from the settling zone by the beginning of the next storm event. This can be achieved with dry, above-ground basins, through use of geotextile filters or similar mechanisms.[10]

6.3.6 Infiltration sumps

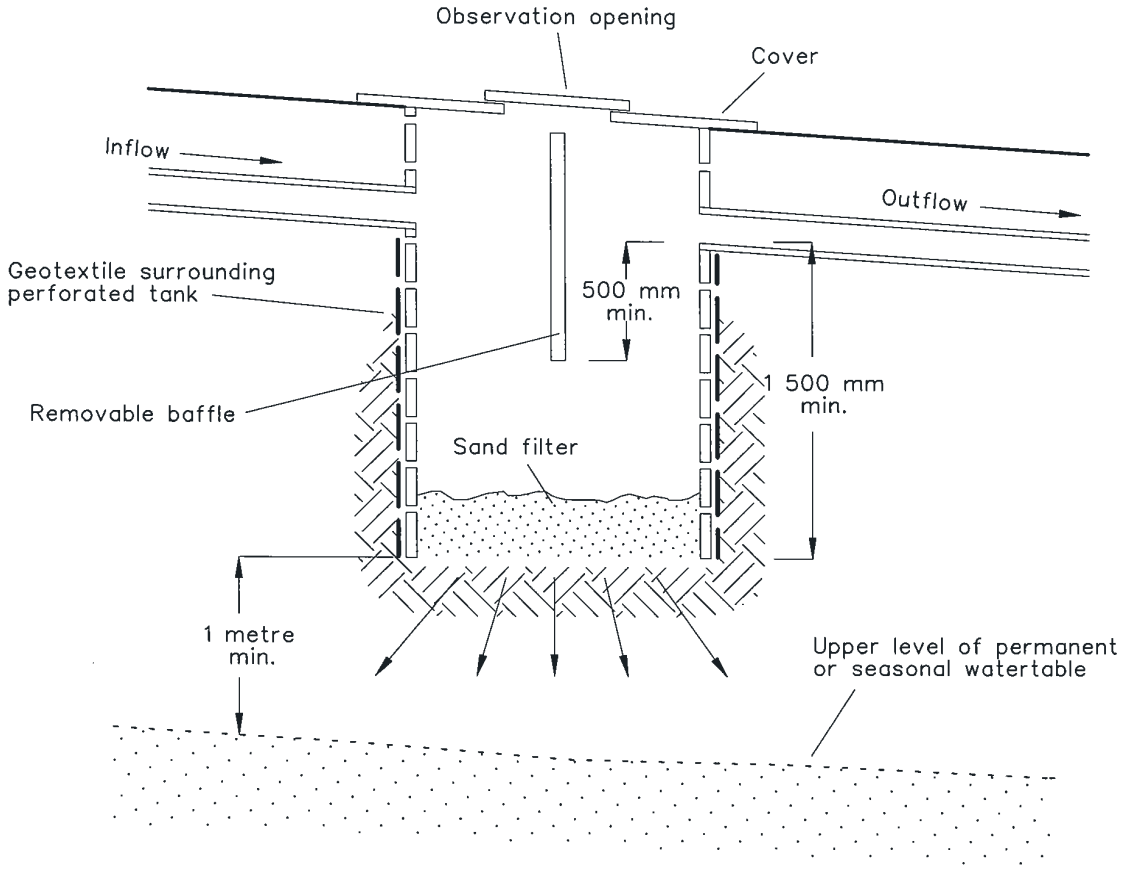
(a) Infiltration sumps (Standard Drawing SD 6-6) are subsurface facilities that collect stormwater for filtration of sediment and infiltration of stormwater to the watertable. They are used as an alternative to the regular sediment retention structures described above where:

- construction of regular structures can be impractical, (e.g. where most of the site will be disturbed for building purposes)
- the soils are well drained (Soil Hydrologic Groups A or B)
- the watertable (seasonal or permanent) is more than 2 metres below the floor of the structure (Chapter 3)
- addition of water to the watertable will not affect salinity levels – testing soils for the presence of soluble salts is essential (Chapter 3)
- groundwater cannot be contaminated
- catchment areas are very small.

Infiltration technology is not supported by the DIPNR unless the soils and groundwater have been properly assessed for their capability.

Figure 6.7 A sediment retention basin constructed on Type C soils with gabion baskets in very steep country. The structure has recently been converted to a constructed wetland.

Figure 6.8 A sediment retention basin constructed on Type C soils from local sandstone gibbers



Construction Notes

1. Join the inlet to the polluted supply taking any suitable step to remove bulky material before it can enter the sump.
2. Connect the outlet to a safe disposal area following the ESCP/SWMP.
3. Place a geotextile liner on the outside of the pit.
4. Install a removable baffle, central to the inflow/outflow and normal to the direction of flow, ensuring that it reaches 500 mm below the invert of the outlet pipe.
5. Install a cover over the pit with an observation port and access cover.

INFILTRATION SUMP

SD 6-6

(b) Generally, infiltration sumps are constructed from floorless plastic or metal tanks with perforated sides and surrounded with geotextile to filter the water before it enters the soil. The perforations should comprise at least 2.5 percent of the total surface area (preferably 7.5 percent), and be evenly placed to ensure water is delivered over the entire facility. Provide an aggregate bed at least 600 mm wide between the tank and the surrounding soil materials (aggregate coarser than the perforations).

(c) The capacity of the sump should accord with that for basins on *Type C* soils, but should have a settling zone depth greater than 1.5 metres.

(d) Provide an accessible observation point to allow estimates to be made about how quickly the tank will dewater following a storm event and to measure sediment levels. Inspect them after every storm event large enough to produce runoff. Pump them out 36 to 48 hours after each storm event if:

- fines block the geotextile and/or floor of the structure
- the infiltration rate drops below 15 mm per hour.

Of course, flocculation might be necessary first.

(e) Maintain design capacity always through regular removal of sediment.

6.3.7 Sediment Filters

(a) Sediment filters (also called sediment retention traps) are temporary measures used in mitigation of sediment pollution to downslope lands and waterways. They are relatively effective at retaining suspended solids coarser than 0.02 mm. Many finer particles and most soluble materials pass through them. They are simple to construct, relatively inexpensive and easily moved as development proceeds.

(b) Materials used in their construction include one or more of straw bales, woven geotextile, earth, rock or suitable crushed concrete products. Generally, actual choice is dependent on constraints imposed by the design criteria (including maintenance needs), availability of materials, cost and site conditions. Straw bales should not be used where they cannot be properly embedded into the ground unless alternative measures are taken to prevent polluted water passing under them.

(c) Place them to keep sediment as close to its source as possible.

(d) Maintain sediment filters so that no more than 30 percent of their design capacity is lost to accumulated sediment and construction materials are replaced when functionality is lost. Dispose of any waste material in an approved manner and where further pollution to downslope lands and waterways should not occur.

(e) Some filters are constrained by external design criteria, including sediment fences and straw bale barriers (Standard Drawings SD 6-7 and SD 6-8 and figure 6.9). They should be able to withstand the erosive forces from the design storm event, usually the 10-year ARI time of concentration event and, therefore, should not be

placed in areas of concentrated water flows. Catchment areas of sediment fences can be constrained by building them along the contour with periodic small returns (figure 6.10) creating several subcatchments. Because these systems are prone to failure in relatively small storm events, subcatchment areas should be sufficiently small to constrain maximum flows to 50 litres per second in the design storm event should all water discharge at one point.

Figure 6.9 Sediment fence constructed below a fill batter – the sediment pollution is the result of a recent storm event

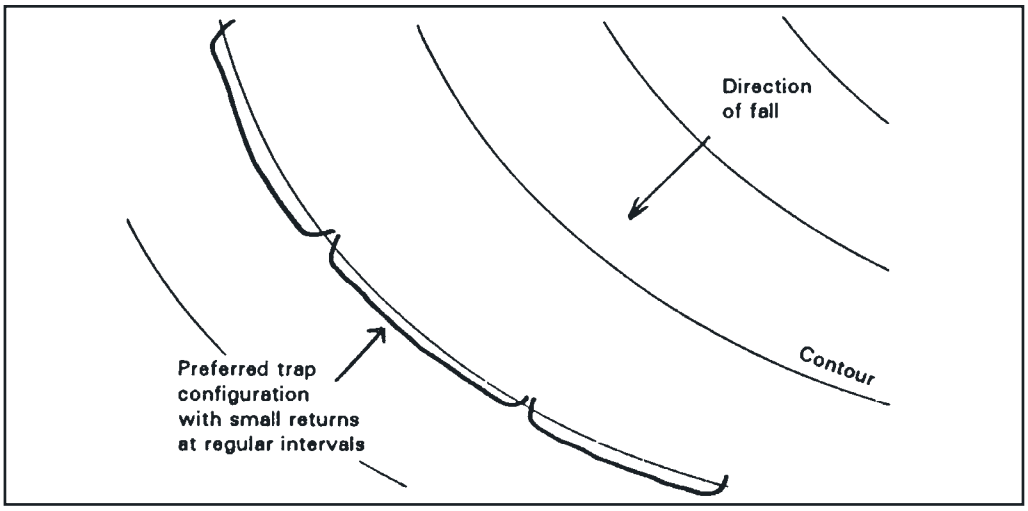
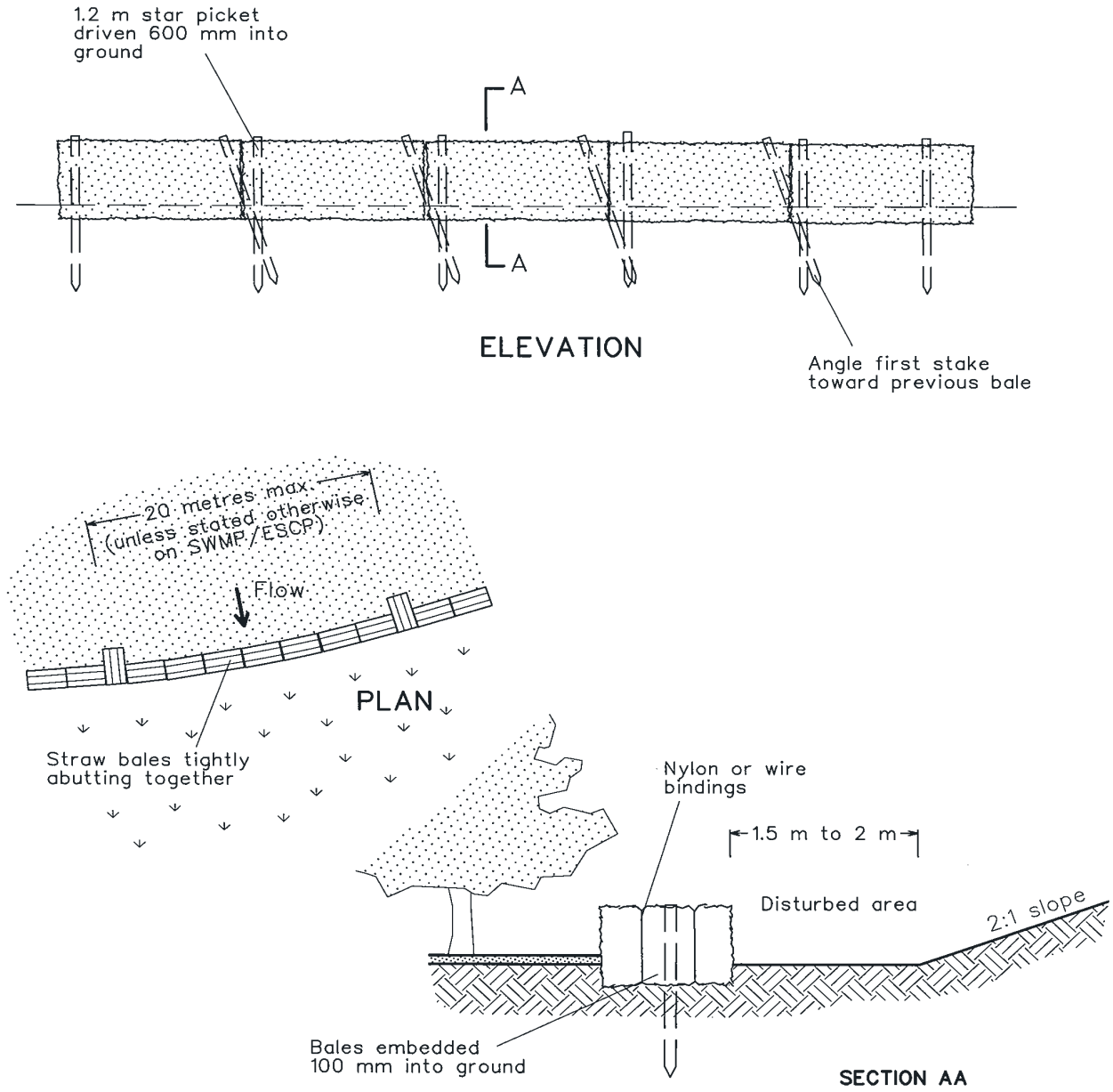


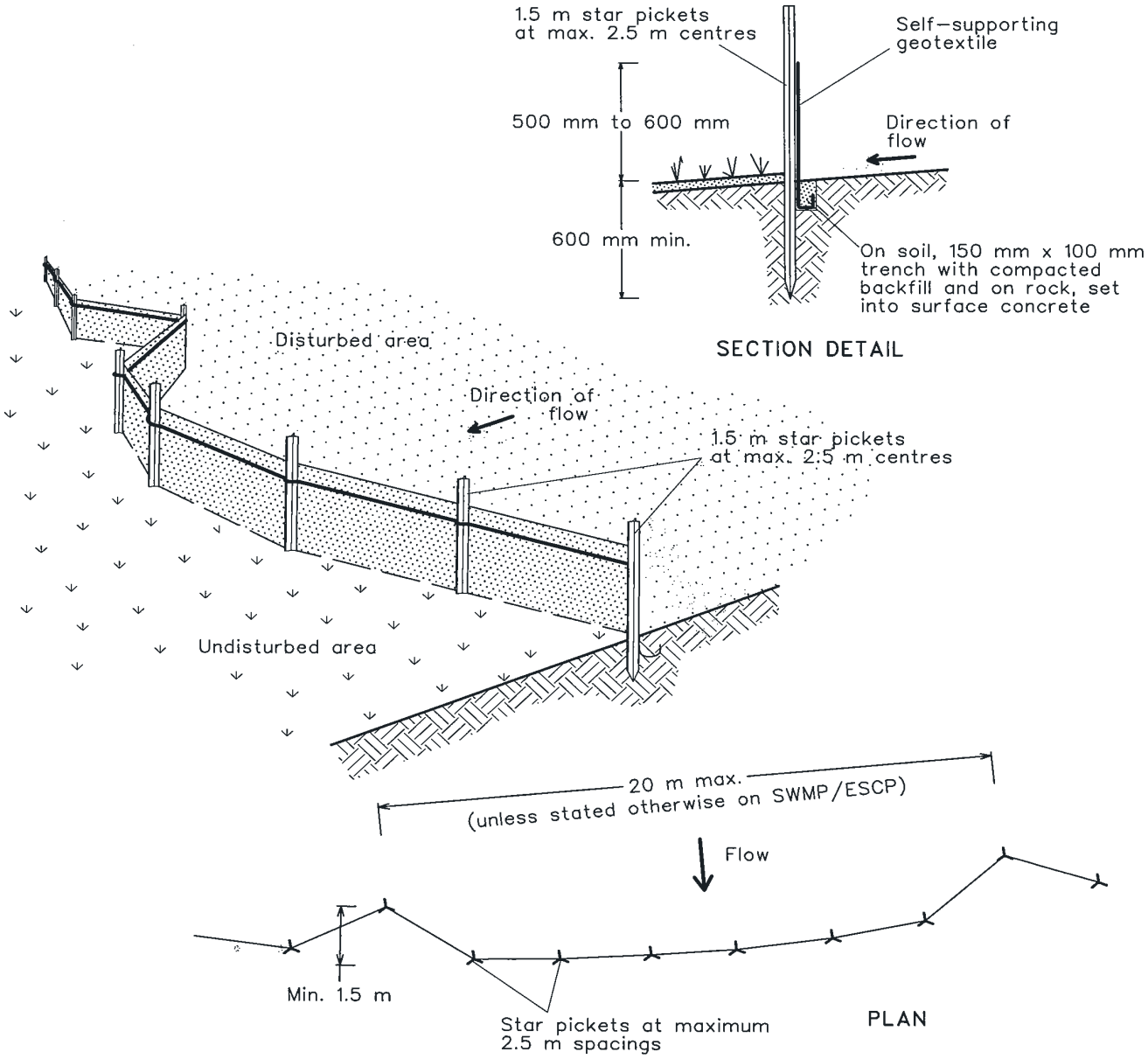
Figure 6.10 Preferred sediment fence configuration



Construction Notes

1. Construct the straw bale filter as close as possible to being parallel to the contours of the site.
2. Place bales lengthwise in a row with ends tightly abutting. Use straw to fill any gaps between bales. Straws are to be placed parallel to ground.
3. Ensure that the maximum height of the filter is one bale.
4. Embed each bale in the ground 75 mm to 100 mm and anchor with two 1.2 metre star pickets or stakes. Angle the first star picket or stake in each bale towards the previously laid bale. Drive them 600 mm into the ground and, if possible, flush with the top of the bales. Where star pickets are used and they protrude above the bales, ensure they are fitted with safety caps.
5. Where a straw bale filter is constructed downslope from a disturbed batter, ensure the bales are placed 1 to 2 metres downslope from the toe.
6. Establish a maintenance program that ensures the integrity of the bales is retained - they could require replacement each two to four months.

STRAW BALE FILTER — SD 6-7



Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SEDIMENT FENCE

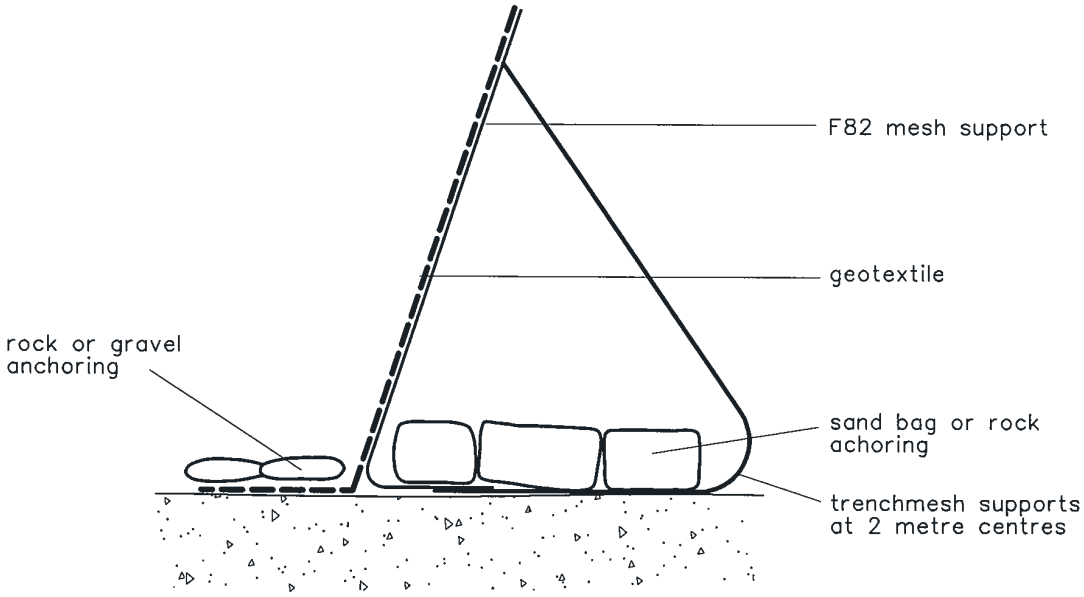
SD 6-8

(f) Special measures must be installed for trapping sediment in intertidal zones, e.g. sediment fences as shown in Standard Drawing SD 6-9.

(g) Floating sediment fences can be constructed below the intertidal zone, providing sufficient water depth is always available for the boom to float (Standard Drawing SD 6-10). They can be used to surround barges when transferring materials to and from the shore or when carrying out dredging activities. Maintenance of fixed of floating sediment fences should be undertaken only at low tides.

(h) Other filters are not constrained by external design criteria, including inlet filters (figure 6.11 and Standard Drawing SD 6-11 and SD 6-12). They are among the least effective of all BMPs at mitigating sediment pollution because their design does not take into account runoff volume. Their installation at any particular location is a matter for the site manager on a day-to-day basis as an informal part of the sediment control program and not normally detailed on any P1an. Nevertheless, they should be placed so that they are unlikely to divert water from its intended course in a very large storm event.

Figure 6.11 Filter roll at kerb-side sump



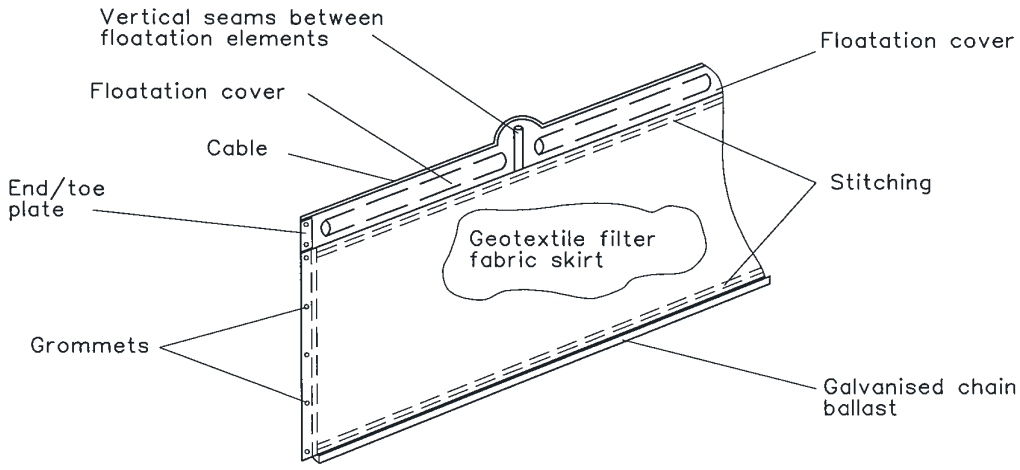
Construction Notes

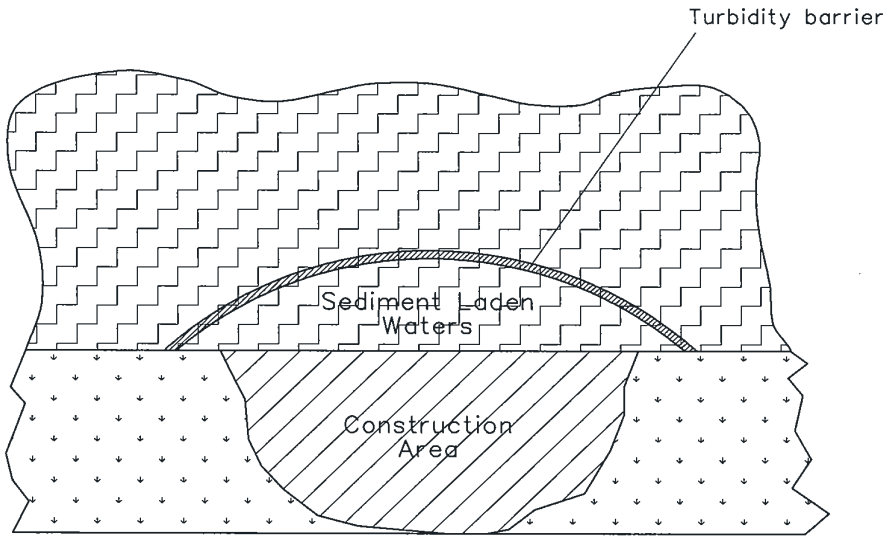
1. Install this type of sediment fence when use of support posts is not desirable or not possible. Such conditions might apply, for example, where approval is granted from the appropriate authorities to place these fences in highly sensitive estuarine areas.

2. Use bent trench mesh to support the F82 welded mesh facing as shown on the drawing above. Attach the geotextile to the welded mesh facing using UV resistant cable ties.

3. Stabilise the whole structure with sandbag or rock anchoring over the trench mesh and the leading edge of the geotextile. The anchoring should be sufficiently large to ensure stability of the structure in the design storm event, usually the 10 year event.

ALTERNATIVE SEDIMENT FENCE SD 6-9

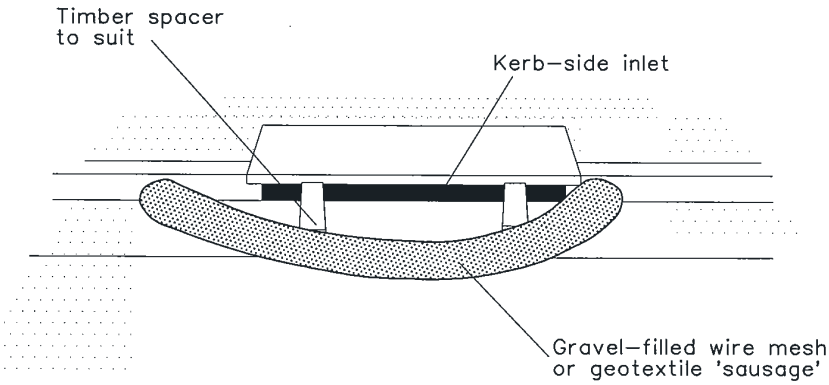


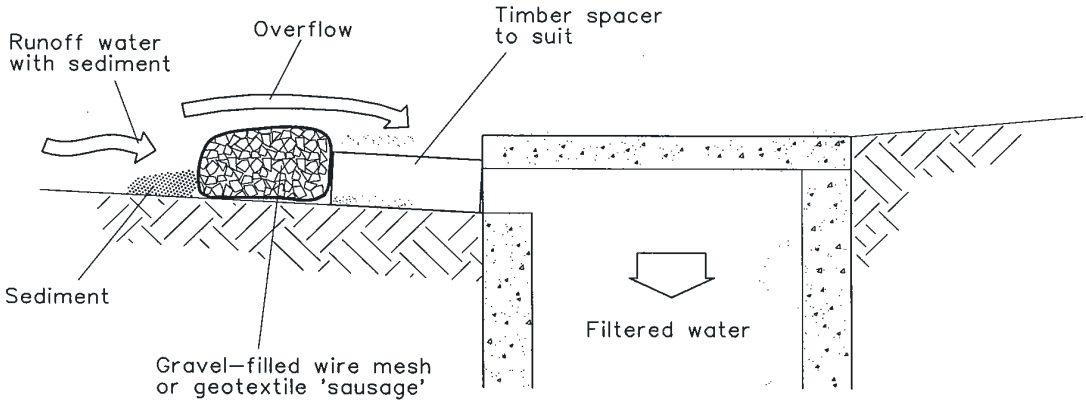


Construction Notes

1. Use turbidity barriers only where high flows are unlikely to remove accumulated sediment and/or move the curtain significantly.
2. Where the barrier is to remain in place for more than one month, ensure the floatation cover is a UV-resistant, durable material.
3. Use only closed cell foam or foam-filled PVC piping as floatation elements. Do not use unfilled pipes.
4. Use only woven or heat-set non woven geotextiles. Needle-punched, non woven geotextiles can become fouled with debris that fray and delaminate them as they move with the waves or currents.
5. Remove captured sediment before the barrier is decommissioned.
6. In tidal areas, ensure the barrier can rise and fall without being moved from its position.

TURBIDITY BARRIER **SD 6-10**



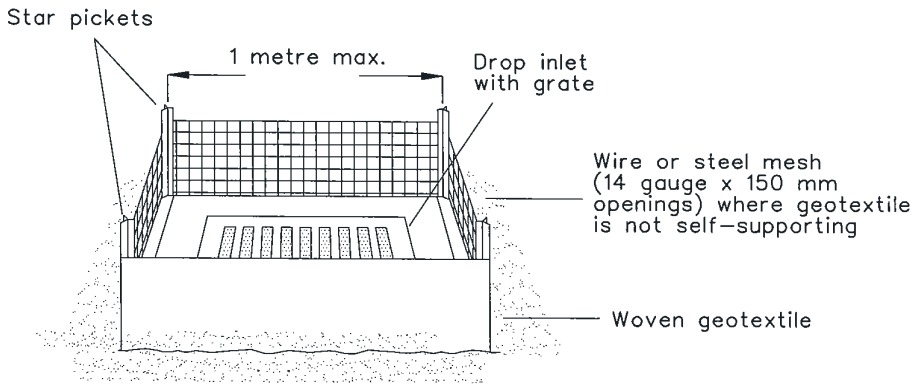


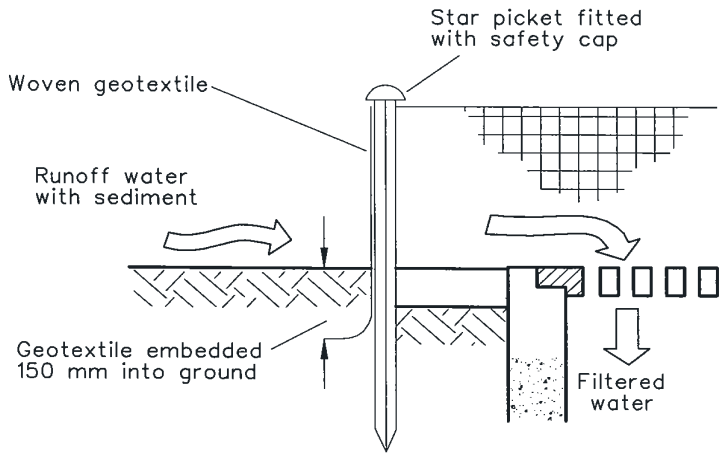
NOTE: This practice only to be used where specified in an approved SWMP/ESCP.

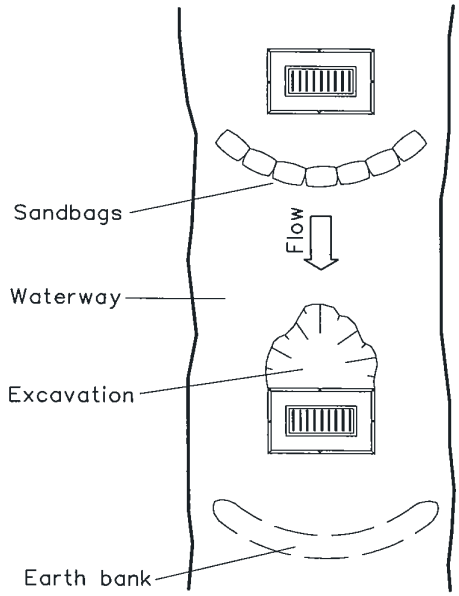
Construction Notes

1. Install filters to kerb inlets only at sag points.
2. Fabricate a sleeve made from geotextile or wire mesh longer than the length of the inlet pit and fill it with 25 mm to 50 mm gravel.
3. Form an elliptical cross-section about 150 mm high x 400 mm wide.
4. Place the filter at the opening leaving at least a 100-mm space between it and the kerb inlet. Maintain the opening with spacer blocks.
5. Form a seal with the kerb to prevent sediment bypassing the filter.
6. Sandbags filled with gravel can substitute for the mesh or geotextile providing they are placed so that they firmly abut each other and sediment-laden waters cannot pass between.

MESH AND GRAVEL INLET FILTER SD 6-11







For drop inlets at non-sag points, sandbags, earth bank or excavation used to create artificial sag point

Construction Notes

1. Fabricate a sediment barrier made from geotextile or straw bales.
2. Follow Standard Drawing 6-7 and Standard Drawing 6-8 for installation procedures for the straw bales or geofabric. Reduce the picket spacing to 1 metre centres.
3. In waterways, artificial sag points can be created with sandbags or earth banks as shown in the drawing.
4. Do not cover the inlet with geotextile unless the design is adequate to allow for all waters to bypass it.

GEOTEXTILE INLET FILTER — SD 6-12

(i) Developed areas, especially inner city areas with space constraints, need careful management of activities to prevent sediment pollution. This is particularly evident where building materials such as sand, fill material and topsoil, etc. are deposited near areas of concentrated water flows, e.g. on footpaths or side of the roads. In such instances, it is essential that stormwater flows in gutters and other surface drains are not impeded nor can they result in materials being washed into drainage systems. Downstream pit protection should be implemented and ongoing maintenance should be provided; pedestrian and vehicular safety and warning devices should be erected.

6.3.8 Filter Strips

(a) Strips of vegetation left or constructed downslope from earthworks provide a simple method of trapping coarse sediment in most storm events other than very large ones. This assumes that, where this vegetation is to be retained, it will have sufficient time to "recover" before the next load of sediment-laden water enters the site.

(b) The following factors should be considered in their design:

(i) the amount of sediment that might be stored in the area above the filter; and

(ii) the width of vegetation in the filter:

- required to filter coarse sediment (usually the upper section)
- required filter some of the finer sediment (usually the lower section).

(c) Native vegetation in riparian zones should not be used as filter strips. Only separate dedicated buffer zones upslope from riparian lands should be used.

(d) Karssies and Prosser (2001) suggest that the following amounts of sediment can be stored above the filter:

- where slopes are less than 4 percent, up to 50 tonnes per hectare per 100 metres length
- where slopes are between 4 and 7 percent, up to 15 tonnes per 100 metres length
- where slopes are between 8 and 10 percent, up to 10 tonnes per 100 metres length.

That significant amounts of sediment are stored in the area above the filter is shown in Figure 6.12.

(e) The suggested widths of grass filters for calculated values of annual soil losses (Appendix A) are in Table 6.4. Note that, generally, vegetated filter strips are most effective where the average annual soil losses are low and the sediment is relatively coarse; they are least effective where the calculated average annual soil losses are

Table 6.4 Recommended Grass Filter Strip Widths for Typical Values of Calculated Annual Soil Loss (Karssies and Prosser, 2001)

Soil loss (t/ha/yr)	Filter strip gradient (%)									
	1	2	3	4	5	6	7	8	9	10
1	2m	2 m	2 m	2m	2 m	2 m	2 m	2 m	2 m	2 m
2	2m	2 m	2 m	2m	2 m	2 m	2 m	2 m	2 m	2 m
5	2m	2 m	2 m	2m	3 m	3 m	3 m	4 m	4 m	4 m
10	2 m	2 m	2 m	5m	6 m	6 m	7 m	7 m	7 m	7 m
20	3 m	9 m	11 m	12 m	12 m	13 m	13 m	13 m	13 m	14 m
30	9 m	15 m	17 m	18 m	19 m	19 m	19 m	20 m	20 m	20 m
40	15 m	21 m	23 m	24 m	25 m	25 m	26 m	26 m	26 m	26 m
50	22m	28m	NR	NR	NR	NR	NR	NR	NR	NR
60	28m	NR	NR	NR	NR	NR	NR	NR	NR	NR
70	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

more than about 40 tonnes per hectare per year and/or the sediment is relatively fine.

(f) The best vegetation cover is one that provides a relatively uniform dense ground cover, e.g. sward-forming grasses about 150 mm high.

(g) A 400-mm wide grass strip can be installed next to a kerb to stabilise the interface between the kerb and footway (Standard Drawing SD 6-13). Also, it can provide worthwhile sediment trapping value in very small storm events.

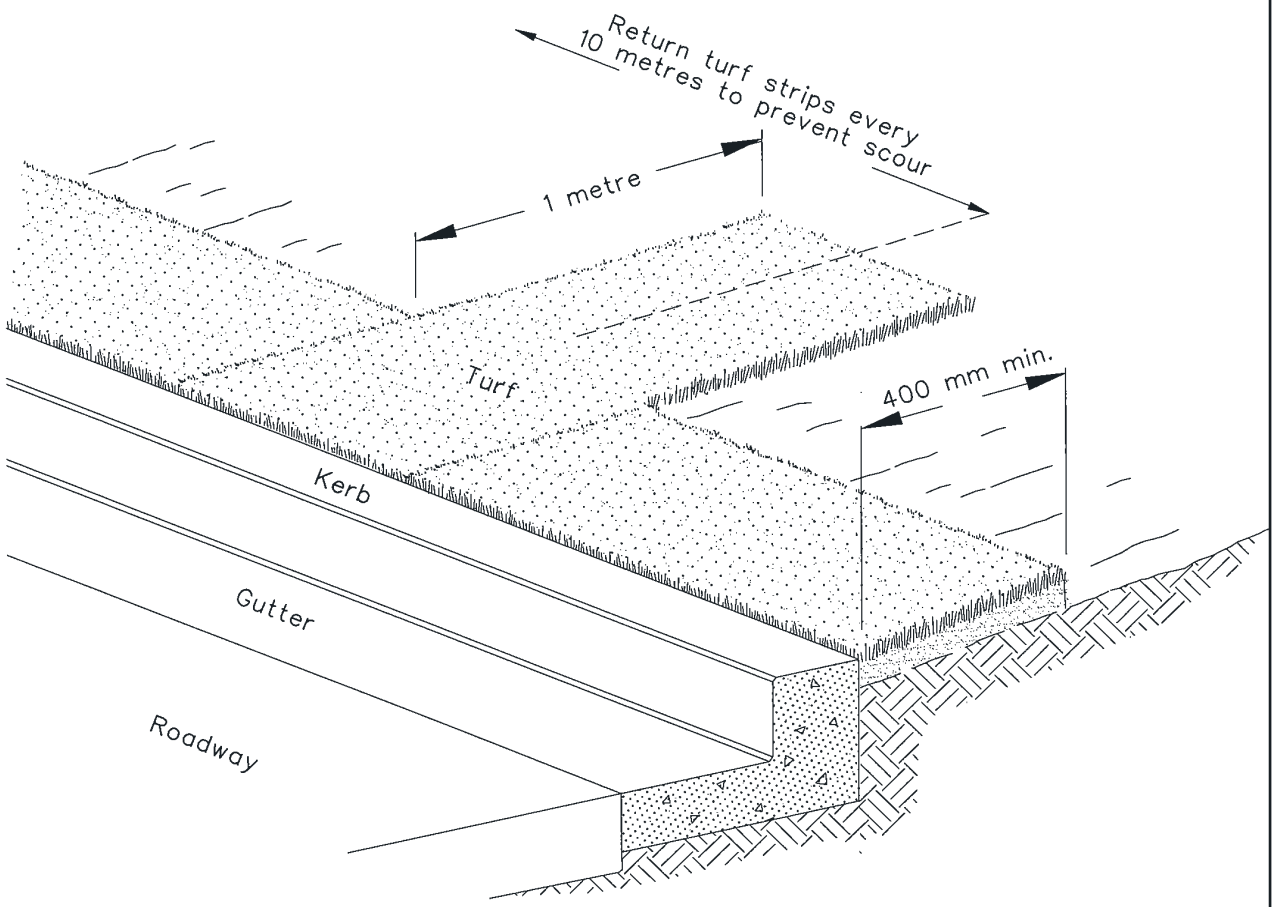
6.3.9 Stabilised Site Access

(a) Access to sites should be stabilised (Standard Drawing 6-14) to reduce the likelihood of vehicles tracking soil materials onto public roads and ensure all-weather entry/exit. Such areas should be at least 3 metres wide (or 2.4 metres per lane) and constructed with maximum 75 mm aggregate at least 15 metres long and 200 mm thick, underlain by needle-punched geotextile.

(b) It is very important that:

- surface water flows are diverted from the area
- the structures are placed so that bypassing them is not possible for vehicles
- they are maintained in an effective condition through removal of sediment and/or addition of extra aggregate.

(c) A variation on the design shown in SD 6-14 where tracking of sediment onto local public roads is likely to be a problem is the use of cattle grids installed under water (figure 6.13).



Construction Notes

1. Install a 400-mm minimum wide roll of turf on the footpath next to the kerb and at the same level as the top of the kerb.
2. Lay 1.4 metre long turf strips normal to the kerb every 10 metres.
3. Rehabilitate disturbed soil behind the

KERBSIDE TURF STRIP **SD 6-13**

Figure 6.12 A kerbside turf strip showing sediment stored in the area above the filter.

Figure 6.13 A simple wash-down system.

(d) In addition, the following limitations should be considered:

(i) Wash-down areas and stabilised accesses require collection and treatment of waste water;

(ii) Ideally, both should be built on level areas; and

(iii) Supplementary, street sweeping on adjacent roads might still be required.

6.3.10 Control of Wind Erosion

(a) Research (Livingston, *et al.*, 1988) has shown that average dust emission rates of over 2.5 tonnes per hectare per month occur at urban construction sites.

(b) Various measures are available to minimise such emissions, including:

(i) limiting the area of lands exposed to erosive forces through:

- phasing works (Chapter 4)
- provision of a protective ground cover including mulches, vegetation (Chapter 7), organic binders or dust retardants
- keeping the ground surface damp (not wet)
- leaving the surface in a rough cloddy condition to increase roughness and slow surface wind speed;

(ii) limiting traffic movement on any disturbed areas;

(iii) applying a suitable hydraulic soil stabiliser to the soil surface to reduce the *C*-factor (Appendix A); and

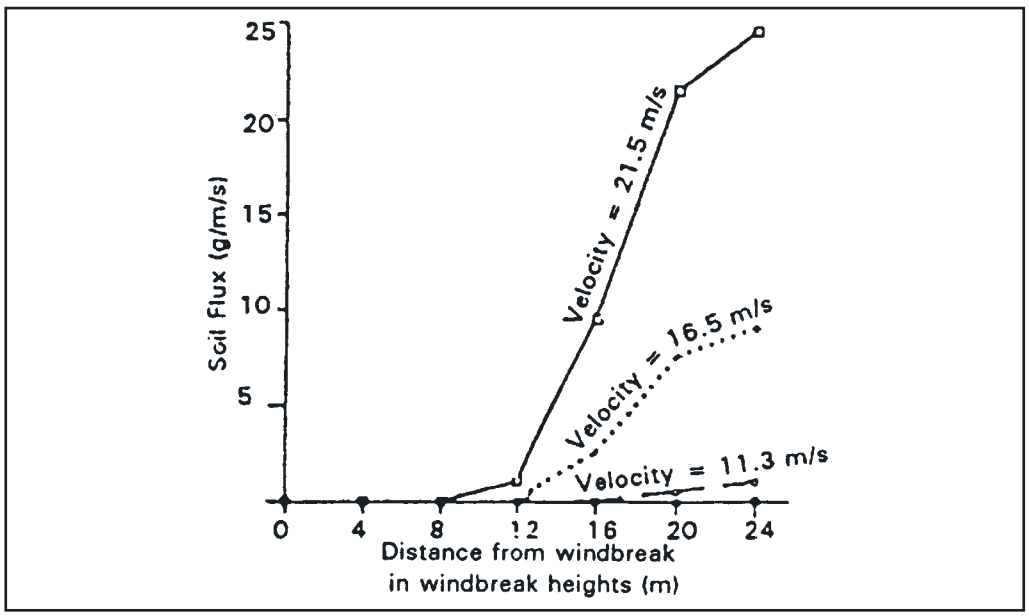


Figure 6.14 Effect of distance from windbreak on soil loss, wind blowing at less than 90° to the windbreak (Leys, 1991)

(iv) on building sites where 1,500 to 5,000 square metres are to be disturbed, installing a 40 percent porous, open-weave barrier fence (Standard Drawing SD 6-15) on the windward side.[19]

6.4 Constructed Wetlands

6.4.1 Preamble

(a) This section has been included to help decide:

- whether or not a constructed wetland might be required on a site
- where it might be placed
- its approximate capacity and dimensions.

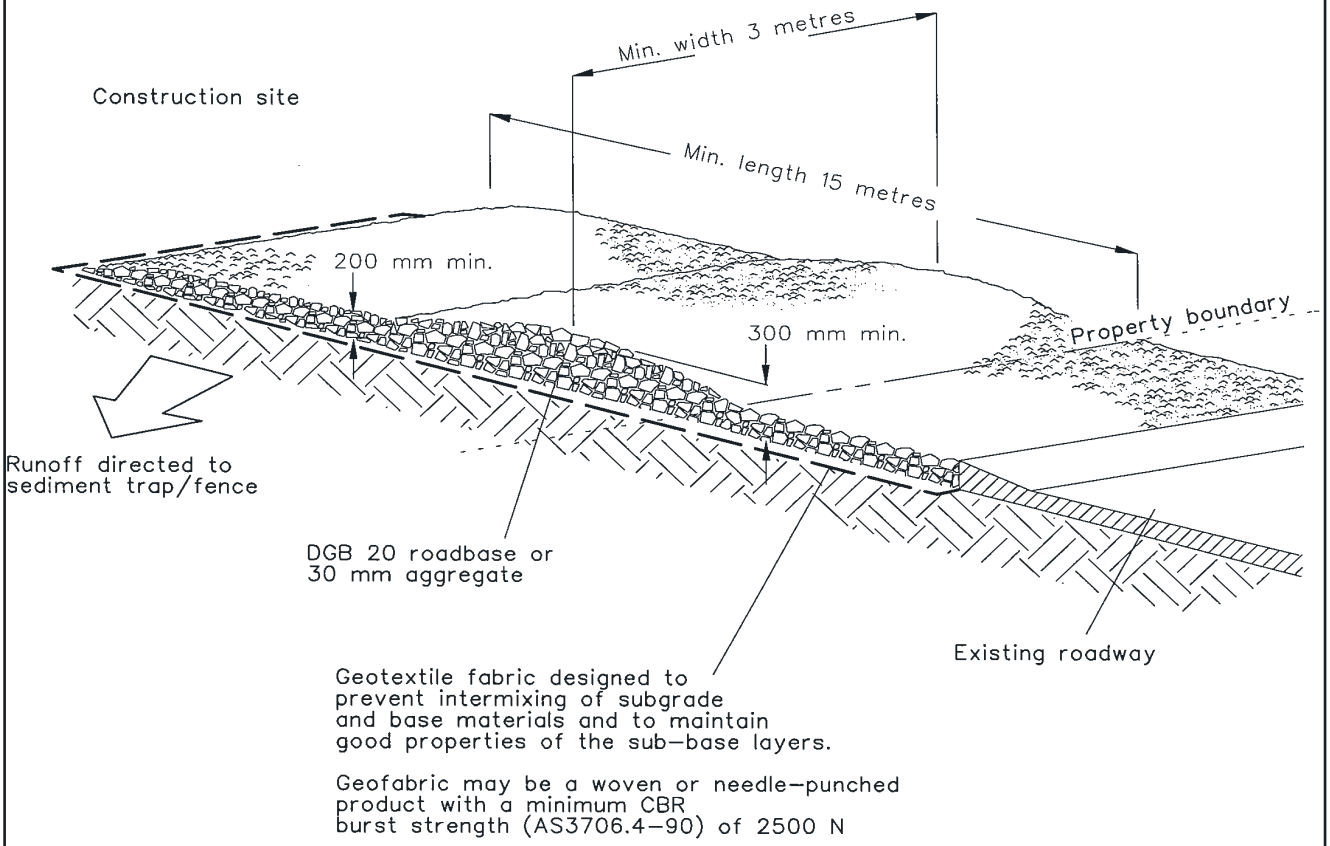
(b) Such information might affect choice, location and design criteria for BMPs to be used during the construction phase, e.g. sediment retention basins. Further, if a wetland is required on site after a land disturbance phase, its use as a temporary sediment retention basin during the disturbance phase should be considered. This section is not intended to aid the detailed design of constructed wetlands, nor does it discuss in sufficient detail their ecology, aesthetics or economics. Information on these topics can be found in DLWC (1998).

(c) Note that neither sediment basins nor wetlands should be built on line on watercourses.

(d) The design criteria and construction details for constructed wetlands are still in an evolutionary phase. Consequently, several national and State-based organisations are involved in the collection of information and investigations into various alternatives for improvement in water quality. Unfortunately, their task is made difficult by the scarcity and variability of existing Australian data. The information presented here should be interpreted in this light.

(e) Nevertheless, constructed wetlands should be considered, especially when undertaking the structure planning of new urban release areas. Their incorporation into infill developments should also be considered, although design opportunities are often limited. Constructed wetlands are most appropriate in areas where receiving water quality problems are, or are likely to result from high nutrient levels.

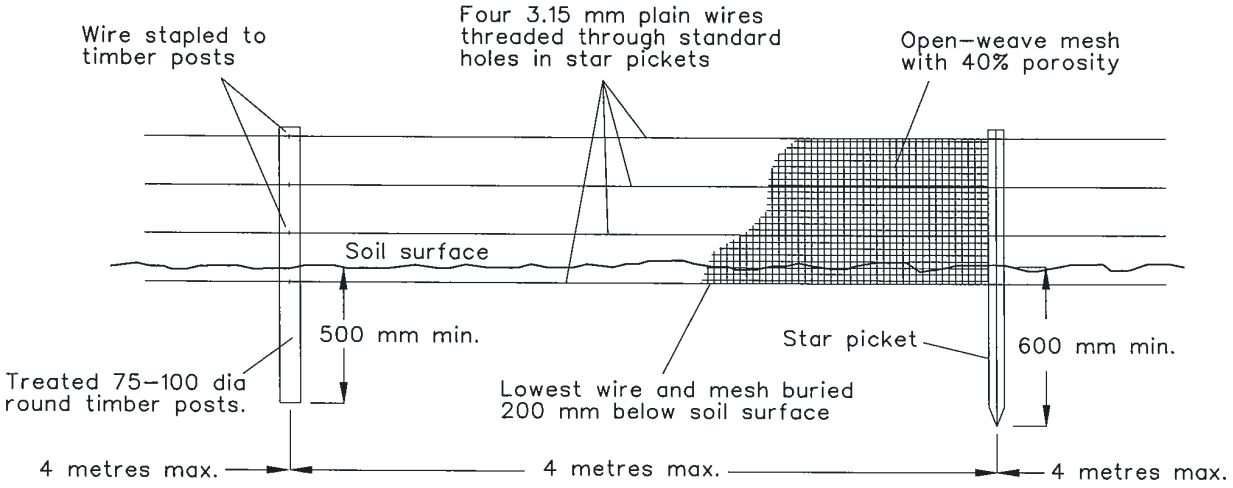
19. Such fences are effective to a distance of 15 times their height, assuming an acceptable soil flux of five grams per metre per second (figure 6:14). Sand and silt particles become airborne at surface wind speeds of about 10 metres per second (36 kilometres per hour) and exceed acceptable limits for airborne dust above 40 kilometres per hour.

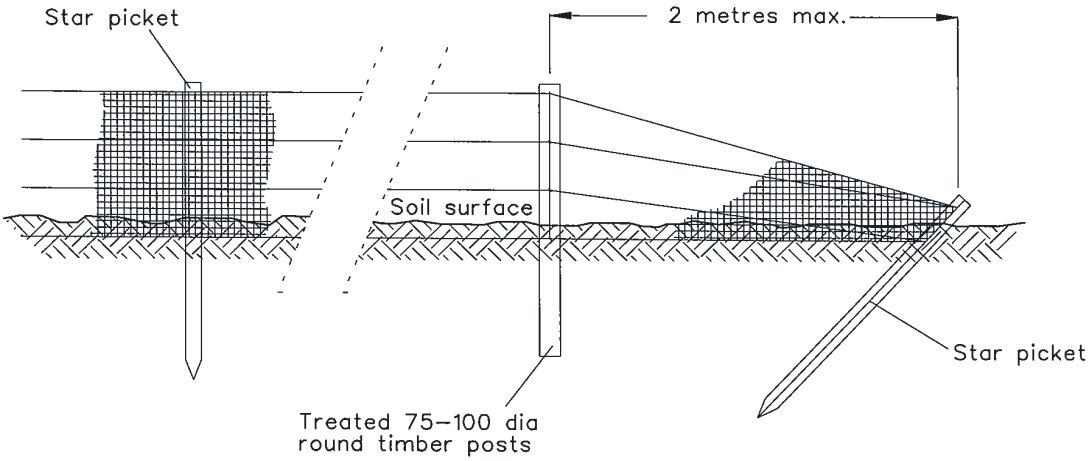


Construction Notes

1. Strip the topsoil, level the site and compact the subgrade.
2. Cover the area with needle-punched geotextile.
3. Construct a 200-mm thick pad over the geotextile using road base or 30-mm aggregate.
4. Ensure the structure is at least 15 metres long or to building alignment and at least 3 metres wide.
5. Where a sediment fence joins onto the stabilised access, construct a hump in the stabilised access to divert water to the sediment fence

STABILISED SITE ACCESS SD 6-14





Construction Notes

1. Install the fence to the height specified in the ESCP/SWMP.
2. Cut a channel 200 mm deep along the fence line.
3. Place wire and light resistant, open-weave polymer mesh with 40 percent porosity on the prevailing wind side of fence.
4. Fasten the mesh to all wires using ring fasteners at 100 mm to 150 mm intervals on top wire and 300 mm intervals on other wires.
5. Use one 75-mm to100-mm diameter treated round timber post every 20 metres.
6. Where star pickets are used, ensure they are fitted with safety caps.

CONTROL OF WIND EROSION

SD 6-15

6.4.2 Introduction

(a) Constructed wetlands are purpose-built structures, predominantly constructed with natural materials of soil, water and biota. They mimic the desired processes and functions of natural systems to achieve specific objectives, such as retention or removal of various pollutants including nutrients, heavy metals, pathogens, hydrocarbons and colloidal particles. Typically, their design criteria aim to ensure that the levels of these pollutants after a land disturbance phase is complete are not worse than those before works began under average annual runoff conditions, especially on "greenfields" subdivisions.

(b) The term "constructed wetland" is considered as the total entity of a project and integrated with surrounding elements of the natural environment.

(c) Although using natural processes, constructed wetlands are not natural systems. Further, they require ongoing monitoring and management for continued performance over their design life.

(d) Before water enters a wetland, it is desirable to:

   (i) reduce sediment loads, particularly dispersible fines, organic debris and other floating materials;

   (ii) attenuate stormwater flows so that the wetland's retention time is not adversely affected; and

   (iii) attenuate stormwater velocities to ensure ecological viability, as scour and erosion can damage planted areas and re-suspend sediment leading to downstream pollution.

6.4.3 Planning

(a) General principles that should be adopted for constructed wetland projects include:

   (i) development with due consideration of any existing catchment or subcatchment stormwater management plan – they should be easily integrated with the local Council's stormwater planning process (see (b), below);

   (ii) construction off-line from watercourses and, preferably, outside the riparian zone;

   (iii) the application of a multi objective planning process (see (c), below);

   (iv) the use of a multi disciplinary team in the planning process that includes an ecological perspective and the likely eventual owner;

   (v) where possible, maintenance or improvement of the predevelopment water quality of the downstream receiving water body; and

   (vi) adoption of an operation and maintenance plan for the ongoing management of the wetland that considers both the biological and physical processes.

(b) Consider wetlands as part of a comprehensive stormwater management system that involves the whole catchment. Therefore, constraints should be assessed on a site-by-site basis (Chapter 3). Where these constraints limit opportunity for construction of wetlands at a particular site, consideration should be given to the control of pollution of nutrients, etc. further down the catchment (i.e. in a regional wetland).

(c) Constructed wetlands should be designed to meet multiple objectives to lengthen their effective life span and improve community usage of the area. Multiple objectives include:

- water quality improvements for various parameters
- wildlife habitats
- flood mitigation
- passive recreation
- visual amenities (landscape features)
- water supply (i.e. park irrigation)
- educational and research value.

(d) Use of constructed wetlands and their surroundings for active recreational purposes should be dependent on an assessment of the risk to human health and of the potentiall for vandalism. The DEC does not recommend water-based activities or fishing unless contaminants in the waters meet the relevant national water quality criteria (ANZECC, 2000 and Dunkerley, 1995). Note that birds can be a major source of faecal contamination, creating conflict between water quality and habitat objectives.

(e) Constructed wetlands for stormwater management are usually within the urban residential environment. Therefore, the local community often has a personal stake, particularly where they are to be retrofitted into an existing area. As a result, best management practice should include a community involvement program incorporating community awareness, consultation and, perhaps, participation (Brown, *et al.*, 1996). Community involvement programs can:

- engender community support and ownership for projects
- help incorporation of community wishes and concerns in the planning and design phases
- provide community education on environmental issues.

(f) Generally, the use of wetlands during the construction phase should not be necessary – during this phase, control of sediment pollution is the major issue. Control of pollution of materials other than sediment usually only becomes necessary after landscaping has started and traffic levels have increased (i.e. in the landscaping and post development phases). However, commissioning wetlands during the construction phase might be convenient if sediment pretreatment is provided.

6.4.4 Wetland Design

Configuration

(a) Where practicable, water entering wetlands should be relatively free of sediment. Pretreatment for sediment control is achieved before water enters the reed bed zone (containing emergent macrophytes) by designing a sedimentation zone. The sedimentation zone or sediment forebay removes coarse sediments from the water column through settling.

(b) Wetlands should be constructed only as offline systems. These are built outside the main flow channel, usually being fed by very small catchments where the drainage system in not of "watercourse" status. In some cases, a diversion structure that allows runoff from large storm events to bypass the system can be considered, but these are problematic in terms of maintaining the connectivity of the watercourse. Online systems built within the flow channel are not appropriate because all runoff flows through them and, consequently:

- their integrity can be damaged in large storm events
- they interrupt the stream or continuum, including the hydrology and the hydraulics, sediment transport and geomorphic processes
- they interrupt the wildlife corridor
- they replace a riparian/aquatic habitat with a wetland habitat.

Chapter 7

SITE STABILISATION

7. Site Stabilisation

7.1 Introduction

7.1.1 Background

(a) Stabilisation can be achieved with vegetation, paving, armouring or any other cover that protects the ground surface from erosive forces, i.e. reduces the *C*-factor to an acceptable level (Appendix A). It is essential on all disturbed lands where works are complete or in temporary abeyance to mitigate sediment pollution to downslope lands and waterways. This is because potential soil loss can often be reduced to about 1 percent or less of the prestabilisation level through the application of a suitable protective cover. In addition, stabilisation can improve the operational efficiency of the complete soil and water management program, and enhance the aesthetic values of the site. Nevertheless, sediment control works are necessary on all sites until stabilisation is complete.

(b) Sections elsewhere in these guidelines highlight the importance of giving priority to those BMPs that mitigate soil erosion in the first place rather than to those that clean up the mess downslope or at the catchment outlet. This is because the control of soil erosion is the simplest and most economical way of minimising sediment pollution.

(c) Vegetation is an ideal and usually inexpensive method of stabilisation because it reduces soil erosion hazards by:

- absorbing the impact of raindrops
- reducing volume and velocity of runoff
- binding the soil with roots
- protecting the soil from the erosive effects of wind.

(d) It is common practice to use annual species as a fast growing and highly effective temporary ground cover. However, these plants die within one season, providing almost no residual surface protection after about six or eight months. Where protection is required beyond six or eight months, using a mixture of perennial and annual species is best. While the perennial species are usually slower to establish, they will grow under the annual species and succeed them to provide a permanent surface protection.

(e) Effective revegetation is possible only where the factors necessary to promote and sustain plant growth levels are adequate, including sunlight, temperature, soil fertility and structure, and moisture levels.

(f) Where land disturbance activities occur in riparian zones or watercourses, prepare a separate *Vegetation Management Plan* (Appendix I). This plan is to cover all disturbed lands to at least 10 metres beyond the works. It should address revegetation, bush regeneration and weed control. It should ensure that previously stored topsoil is respread over disturbed lands and the litter layer is restored. Any imported topsoil must be weed free.

(g) If non indigenous plants are to be used as a temporary measure in natural areas, sterile hybrid species are preferred. Invasive species, such as Kikuyu and Rhodes Grass should not be used if not already common in the immediate vicinity.

7.1.2 General Principles

(a) Where practicable, schedule the land disturbance program so that the time from starting activities to completion of the final rehabilitation program is less than six months. Special erosion and sediment control measures should be considered where such staging of land disturbance activities is not possible. Here, rehabilitation is defined two ways, depending on the local rainfall erosivity:

(i) In periods of expected low rainfall erosivity during the rehabilitation period, achieve a *C*-factor of less than 0.15 and keep it there by vegetation, paving, armouring, etc.[1] Low rainfall erosivity is a month with an erosivity of less than 100. The erosivity for a month at a location is calculated by:

R-factor X percentage of annual EI occurring per month (Table 6.2 – derive the zone from figure 4.9).[2]

(ii) In periods of moderate to high rainfall erosivity during the rehabilitation period, achieve a *C*-factor of less than 0.1 and set in motion a program that should ensure it will drop permanently, by vegetation, paving, armouring, etc. to less than 0.05 within a further 60 days. Of course, local water restrictions might affect this in drought times.

(b) In addition, schedule works above the 2-year ARI flood level so that the duration from the conclusion of land shaping to completion of final stabilisation is less than 20 working days. Where practical, phase works so that:

(i) minimal lands are exposed to the forces of soil erosion at any one time; and

(ii) site stabilisation measures are progressively installed throughout the development phase.

(c) However, where works are within the 2-year ARI flood level, ensure that the *C*-factors are higher than 0.1 only when the 3-day forecast suggests that rain is unlikely. In this case, management regimes should be established that facilitate rehabilitation within

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1. *C*-factors of 0.15 can be achieved in various ways as shown at Appendix A, note especially figure A5, Table A3 and Table A4. For example, figure A5 shows that:
   (i) A *C*-factor of 0.15 can be achieved with about 30 percent ground cover where the soils have not been disturbed recently and 50 percent cover where they have been disturbed (as at most construction sites);
   (ii) A *C*-factor of 0.05 can be achieved with about 55 percent and 70 percent cover on undisturbed and disturbed soils respectively.
2. Fortnightly *EI* data are available for some locations in New South Wales (Rosewell and Turner, 1992) (Table 7.1) and monthly data in Queensland (Rosenthal and White, 1980). Monthly estimates are available for some locations in South Australia (Yu and Rosewell, 1996) and Western Australia (McFarlane *et al.* 1986). A method for estimating half monthly values of erosivity from monthly data is provided by Renard *et al.* (1997).

24 hours should the forecast prove incorrect. Of course, this assumes that the regular suite of BMPs is installed as outlined elsewhere in these guidelines.

(d) While *C*-factors are likely to rise to 1.0 during the work's program, they should not exceed those given in Table 7.1.

Table 7.1 Maximum acceptable C-factors at nominated times during works.

Lands	Maximum *C*-factor	Remarks
Waterways and other areas subjected to concentrated flows (Section 5.2.3), post construction	0.05	Applies after 10 working days from completion of formation and before they are allowed to carry any concentrated flows. Also, note the requirements of Table 5.1 (Note: a *C*-factor of 0.05 can be acheived various ways, including with about 70% groundcover. See Appendix A, especially figure A5 and Tables A3 and A4)
Stockpiles (Section 4.2.2), post construction	0.10	Applies after 10 working days from completion of formation (Note: a *C*-factor of 0.10 is acheved with about 60% groundcover)
All lands, including waterways and stock-piles during construction	0.15	Applies after 20 working days of inactivity, even though works might continue later (Note: a *C*-factor of 0.15 can be acheived various ways, including with about 50% groundcover. See Appendix A, especially figure A5 and Tables A3 and A4)

(e) Successful revegetation of lands requires:

- availability of acceptable soil materials
- correct site preparation
- selection of the most suitable establishment technique
- selection of appropriate plant species, fertiliser(s) and ameliorant(s)
- application of sufficient water for germination and to sustain plant growth if rainfall is insufficient
- an adequate maintenance program.

Proper investigation of each of these matters on a site-specific basis is usually required.

(f) Investigate areas not satisfactorily revegetated to determine the reason for failure. Then undertake appropriate remedial action, including replacing any lost topsoil and resowing the site.

(g) Maintain any erosion and sediment control measures until all earthworks are completed and the site rehabilitated. Where appropriate, remove soil conservation structures as the last activity in the site stabilisation program.

7.2 Revegetation: Lands Subjected to Sheet Flow

7.2.1 Introduction

(a) On lands subjected to sheet flow, consider revegetation programs over two stages:

  (i) Primary revegetation, which normally does not include native species and is designed to reduce the erosion hazard to an acceptable level rapidly (figure 7.2); and

  (ii) Secondary revegetation, which might follow to create an aesthetically more pleasing environment through natural or artificial addition of permanent endemic/native species.[3]

(b) The landscape analysis for the site will identify a suitable strategy for revegetation, reflecting a specific theme such as mown grass, bushland regeneration, etc.

7.2.2 Primary Revegetation

(a) Primary revegetation usually includes the use of exotic species,[4] in particular pasture grasses.[5] In most cases:

  (i) use annuals where a quick, temporary cover is required (for up to about six months), and perennials for long term protection; and

  (ii) use warm season species where summer rainfall is dominant, and cool season species where winter rainfall is dominant and/or winters are cold.

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3. Primary revegetation might be omitted where the erosion hazard has been brought under control through use of mulches and/or various fabrics (Section 7.4.1). Exercise care in ensuring that:
   - materials are not toxic to the desired plant species
   - they are maintained until the secondary species are producing their own mulch (can be three to five years).
4. This recommendation does not hold in bushland areas if the use of exotic species is regarded as undesirable.
5. Exotic pasture species are preferred for primary revegetation because they are more easily established, provide rapid cover, and root growth quickly binds the soil surface. In addition, the seed is commercially available, seed viability is usually high and sowing methods are relatively simple. Legumes, in spite of the beneficial addition of nitrogen to the soil, are rarely used in urban revegetation programs because of their specialised management requirements.

Figure 7.1 Unsatisfactory site stabilisation has resulted in substantial quantities of sediment leaving the site

Figure 7.2 Primary revegetation of an earth batter with straw mulching (Section 7.4.1). Notice the sediment fence and barrier mesh to minimise soil erosion and sediment pollution

In the Sydney Region, Appendix G might help in the choice of plant species, fertilisers and ameliorants. Elsewhere, seek advice from local seed merchants or appropriate government departments for listings of species, sowing rates and fertiliser requirements suitable for rehabilitation.

(b) As the physical and chemical characteristics of many subsoil materials inhibit the establishment of plants, respreading of topsoil (Section 4.3) over the disturbed area is recommended. Avoid incorporation of subsoil material into the topsoil.

(c) Where practical to do so, a seedbed should be cultivated before sowing seed (Standard Drawing 7-1). This should include deep ripping to at least 300mm.

(d) Where possible, ensure any cultivation of the soil is parallel to the contour.

(e) Plants can be established (figure 7.3) by:

(i) broadcasting, particularly on very small areas (<one hectare) or lands that are inaccessible to conventional implements;[6]

(ii) conventional implements[7] including direct drilling or sod seeding to a depth of about 10 mm to 15 mm;[8]

(iii) laying turf such as couch or kikuyu, particularly where immediate vegetative cover is required for stabili-sation or aesthetic reasons; and[9]

(iv) hydraulic seeding, especially on steep or inaccessible areas (figure 7.2).

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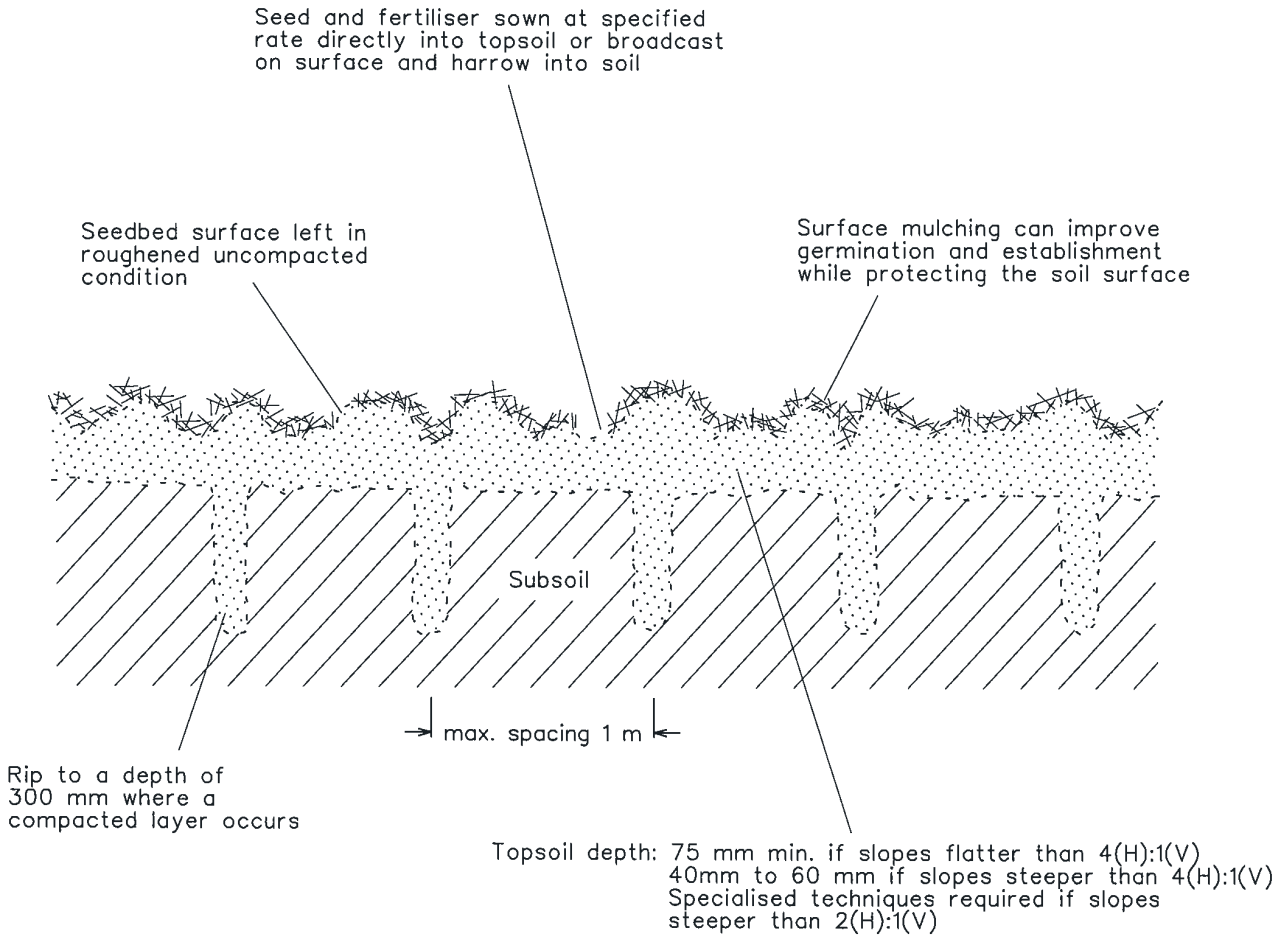
6. Add sand to the seed to help achieve an even spread. Where grasses are being established, harrow the surface immediately after the seed and fertiliser have been applied. With the establishment of bushland plant species, undertake the harrowing first.
7. Use of conventional implements is usually the most cost-effective method of establishing plants from seed. Plants with small seeds, grasses in particular, establish on a fine seedbed best. However, a relatively rough seedbed might be required where the soil is dispersible or the erosion risk is high (e.g. on Soil Loss Classes 5 to 7 lands). It can be formed by scarifying to a depth of about 50 mm to 75 mm. A rough seedbed is less likely to "surface seal" and will absorb moisture more readily (SD 7-1).
8. These methods are preferred and have three advantages:
   - fertiliser is placed below the soil surface reducing the possibility of it being washed into waterways
   - precision planting of seed and fertiliser is achieved (if appropriate)
   - higher germination rates usually occur.
9. Turf should be:
   - placed on a bed of fertilised topsoil of a minimum depth of 75 mm
   - laid parallel to the contour on sites with steep slope gradients
   - normal to direction of flow in waterways
   - under or over a pegged artificial mesh (e.g. a light polypropylene, UV stabilised mesh with about 20-mm openings) in areas of very high water velocity
   - rolled or tamped immediately as it is laid
   - where necessary, pegged to the soil at 1 to 2 metre centres, e.g. with 4 mm (No. 8 gauge) wire approximately 200 mm in length
   - watered immediately to enhance establishment
   - watered regularly for the first seven days or as required to effect establishment
   - mowed as required under the maintenance contract for the site.



Construction Notes

1. Loosen compacted soil before sowing any seed. If necessary, rip the soil to a depth of 300 mm. Avoid rotary hoe cultivation.
2. Work the ground only as much as necessary to achieve the desired tilth and prepare a good seedbed.
3. Avoid cultivation in very wet or very dry conditions.
4. Cultivate on or close to the contour where possible, not up and down the slope.

SEEDBED PREPARATION SD 7-1

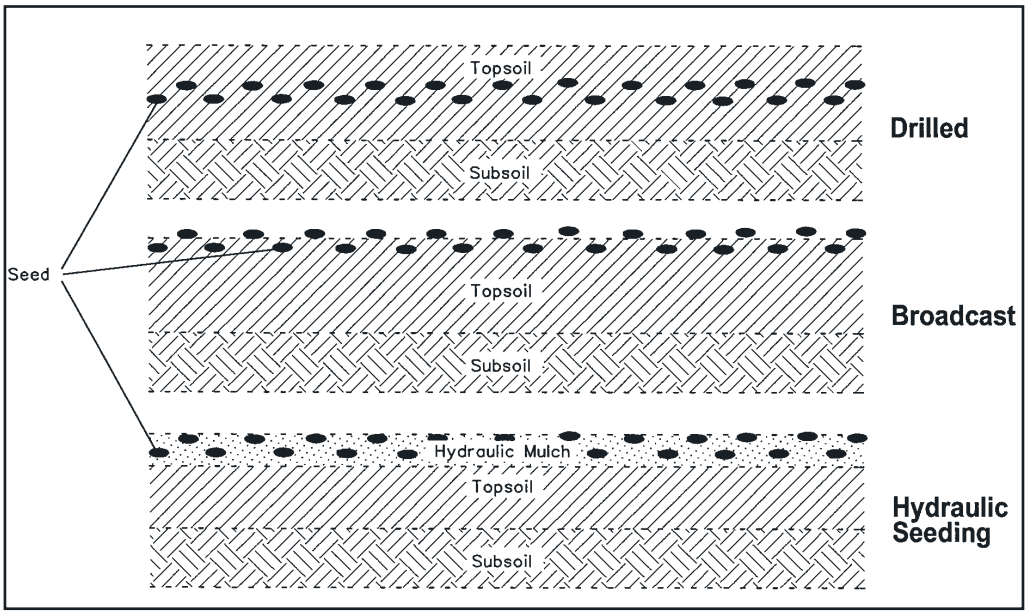


Figure 7.3 Seed placement with different sowing methods

(f) In addition to identifying the best species mix, establishing the best fertiliser and ameliorant mix for plant growth is essential.[10]

(g) Establishment of plants should not be attempted during hot, dry periods unless sufficient water can be applied artificially.

7.2.3 Secondary Revegetation

(a) Secondary revegetation normally follows the primary revegetation program, although species can be established at the same time.

(b) Include native species propagated to enhance ecological values and create an aesthetically pleasing environment after the soil erosion hazard has been reduced. Near watercourses, use native plants propagated from seeds collected from the local area.

(c) Establishment can be from seed, tube stock or invasion from the surrounding bushland. Where possible, choose species that will rapidly provide an adequate mulch to protect the ground surface from the forces of erosion.[11]

10. For optimum establishment and growth of exotic species, many soils require ameliorants to alter the soil pH and/or improve the soil structure. Details on specific requirements can be obtained from appropriate government departments or through laboratory testing of the soil materials.
11. Most exotic pasture species have difficulty competing with taller native plants when more than about 70 percent shading occurs.

(d) Effective establishment of native species, particularly those endemic to the region, usually requires an environment where the ongoing nutrient and moisture regimes are close to the natural status.[12] Avoid the use of fertilisers and/or ameliorants except in situations where they are likely to leach from the soil relatively quickly, and any modified conditions are unlikely to be retained. These factors are often critical when reestablishing or retaining native bushland downslope from an urban subdivision, for example, where drainage from well-tended gardens can create an environment where exotic plants can compete effectively with native plants.

(e) Where primary revegetation is omitted in bushland areas, protect the ground surface against erosion with mulch or a biodegradable blanket until adequate mulch is produced naturally by local plants (Section 7.4.1). This can also reduce weed competition, depending on depth or thickness.

7.3 Revegetation: Lands Subjected to Concentrated Flow

7.3.1 Introduction

(a) While most erosion control techniques are satisfactory under sheet flows conditions (e.g. wood chip mulches), special measures are essential under concentrated flow conditions. Some of these are identified in Table A4 (Appendix A). These special measures should be considered on all lands within the 10-year ARI flood level.

(b) Generally, use plants as a protective measure to bind the surface together. This is especially important in waterways because:

  (i) their growth pattern usually results in lower water velocities (therefore, increased time of concentration, lower peak flows and fewer outlet problems);

  (ii) they can filter pollutants from the water, including sediment and nutrients; and

  (iii) usually, they are aesthetically more pleasing than non vegetative materials.

(c) In most situations, use only non invasive exotic species for revegetation of lands subjected to concentrated water flow because:

  (i) seed is more likely to be available in commercial quantities when required; and

  (ii) they are more effective than native species in binding the soil material and reducing the soil erosion hazard.

12. Most native species have evolved adaptations to a harsh environment that often include soils deficient in nutrients, and/or that have extremes of pH, and/or that have extreme fluctuations in available moisture. Exotic species usually do not grow well in such environments without modification to one or more of these factors.

(d) Do not use reinforced turf near watercourses unless the mesh is biodegradable. If exposed, it can:

- be a threat to wildlife
- lead to mass failure of the turf if snagged.

7.3.2 Vegetation Establishment

(a) Establishment of plants on lands subjected to concentrated flows can be undertaken using similar methods to those described in Section 7.2.2 for Primary Revegetation.

(b) Areas of frequent channelised flow are best stabilised with reinforced turf.

(c) Where water flow is saline or relatively continuous, suitable species and channel treatment should be planned to avoid establishment failure and channel damage.

(d) Permanently established vegetated waterways should provide protection to the soil against the erosive action of flowing water as described in Section 5.3.3(c) and Table 5.2 in the design storm event (Section 2.3.1 (e)).

7.4 Special Considerations

7.4.1 Aids to Establishment

(a) Mulches:

(i) usually provide a protective cover for the soil surface to prevent erosion of loose soil/fertiliser particles (Table A3, Appendix A), especially on lands with moderate to steep slopes, and help establishment of plants by reducing evaporation and increasing water infiltration;

(ii) should be 20 mm to 40 mm thick – thicker mulches (75 mm to 100 mm) inhibit germination and can be applied to control weeds; and

(iii) in bushland areas, should be:

- comprised of local native species where available
- maintained until the vegetative cover can provide adequate protection against the erosive forces (figure 7.4; cf. figure 7.3).

(b) Straw mulches:

(i) are particularly effective where soils are dispersible, on sites with a high soil erosion hazard, or where soil moisture is likely to be inadequate for successful plant establishment (e.g. batters);

(ii) such as wheat or oaten straw are suitable at about 250 bales per hectare, other than in bushland areas, and should be dry when applied and have a low leaf content;

(iii) should be free of non endemic seed in bushland areas; and

(iv) should be sprayed with an anionic bitumen emulsion at 2,500 litres per hectare or other suitable binder.

(c) Brush mulches:

(i) are preferred on lands where regeneration of native plants is wanted as it can provide an additional source of seed — of course, using endemic plant materials;

(ii) should be applied parallel to the contour; and

(iii) should be stockpiled with care since spontaneous combustion can occur.

Care should be exercised to ensure the cutting of local brush does not damage adjoining ecosystems. Brush should only be taken from approved cleared areas.

(d) Wood chip mulches are useful for weed control. Mulched street tree loppings and pine flakes are preferred from an ESD standpoint. Processed hardwood is ESD acceptable if taken from forest trimmings and not from primary forest timber trees.

(e) Biodegradable blankets (see Appendix D), including jute mesh and plant fibre matting, are alternatives to mulches and particularly useful in areas of high water concentration[13] Jute mesh should be sprayed with an anionic bitumen emulsion at about 1 to 3 litres per square metre for extra stability in areas where concentrated runoff might occur.

(f) Bitumen emulsion can be applied by itself as mulch and is suitable for areas where cool season plants will be sown and soil moisture is not a major constraint to plant establishment.

(g) Hydroseeding is particularly useful in the higher rainfall, coastal areas. Supplementary watering is advisable if weather conditions are unfavourable for germination or establishment. Include polymers or bituminous binders on steep lands. [14]

13. They can provide temporary protection to earth drains intended to be removed or upgraded within six months, or grassed waterways that have only recently been established from seed or runners (figure 4.4).

14. Hydroseeding involves the mixing of seed, fertiliser and a paper or wood pulp with water to form a slurry sprayed over the area to be revegetated. The seed generally sticks to the pulp that improves the microclimate for germination and establishment. Hydromulching is a different operation to hydroseeding in that it uses a higher rate of cellulose fibre to act as mulch by itself. Hydroseeding and straw mulching are normally concurrent operations and achieve superior results to hydromulching.

Figure 7.4 Lack of site stabilisation of a drainage line following installation of services

Figure 7.5 Effective mulching of a service easement using local brush

7.4.2 Saline Areas

(a) A Western Sydney Salinity Code of Practice has been prepared by the 13 relevant Councils through the Western Sydney Salinity Working Party. This is a useful document to help all those working in saline areas, but especially in western Sydney and should be consulted wherever salinity is expected, especially on soils derived from marine sediments such as the Wianamatta Shales. Read the Code together with the Salinity Hazard Map prepared by the Department of Infrastructure, Planning and Natural Resources.

(b) Salinity occurs when salts found in the soil or groundwater mobilise, allowing capillary rise and evaporation to concentrate salts at the ground surface. Usually, such movements are brought about by changes to the natural water cycle through:

- artificially adding water to the watertable, causing it to rise
- removing deep-rooted vegetation
- impeding subsoil drainage.

(c) Some developers in western Sydney have unwittingly contributed to the problem by following water-sensitive urban design principles developed in other places where salinity is not a problem. Specifically, they have followed procedures designed to encourage excessive infiltration to the watertable without a full appreciation of the consequences. Infiltration measures, while encouraged, should incorporate a subsurface drain and liner where infiltration to groundwater might exacerbate salinity problems.

(d) If the watertable within the root zone becomes saline, the vegetative cover is likely to die and expose the soil to erosive forces. Salinity also can affect built infrastructure, affecting detrimentally concrete, bricks and metal, and resulting in structural damage and unnecessary repair costs.

(e) Salinity problems are usually overcome by lowering the watertable through:

(i) reducing infiltration rates, e.g. lining waterways with impervious materials

(ii) improving drainage, e.g. installation of subsoil drains;

(iii) planting deep-rooting salt-tolerant plants to act as "pumps".

(f) Choose plant species for rehabilitated lands that are more tolerant of any likely high salt levels.[15]

(g) Where necessary, implement building controls and/or other engineering responses to salinity problems.

15. Including (from highly salt tolerant to moderately tolerant) puccinellia, tall wheat grass, couch, Wimmera rye grass, Rhodes grass, phalaris, strawberry clover and lucerne (Hamilton and Lang, 1978).

7.4.3 Maintenance

(a) Maintenance (Chapter 8) of both soil conservation works and revegetated areas is an essential part of any rehabilitation program and should be addressed in the *ESCP/SWMP*. It can include:

   (i) periodic application of water, especially in the first seven days from establishment on turfed areas and/or in hot, dry weather;

   (ii) further application of seed and fertiliser in areas of minor soil erosion and/or inadequate vegetative establishment; and

   (iii) regular mowing, especially in waterways, to control weeds and to maintain a cover that does not impede flows and cause flooding or accumulation of pools of stagnant water.

(b) Establish salt-tolerant species or apply other corrective measures where bare areas arise because of salinity in surface or ground water and soils.

(c) Control excessive vegetative growth through mowing, slashing or judicious use of herbicides. Do not mechanically grade vegetated waterways and road verges unless part of a further stabilisation program.[16]

16. Set mower height no lower than 75 mm above the ground surface.

Chapter 8

MAINTENANCE

8. Maintenance

8.1 Introduction

(a) Proper maintenance of soil and water conservation works plays a vital part in their management and operation. After a storm event, the effectiveness of the established controls can be readily seen with any shortcomings and damage.

(b) Always keep the potential hazards of soil erosion at the site and consequent sediment pollution to downslope areas to a minimum. This is always important, but especially before times when works are unlikely to proceed for any reason. Accordingly, the site manager should check the operation of all soil and water management works each day and initiate repair or maintenance as required.

(c) Current legislation requires the quality of run off water leaving each site to be of an acceptable standard. Penalties apply where pollution to downslope lands and waterways occurs. The law does not recognise:

- whether or not the site is difficult
- problems that might be encountered in implementing the plan
- whether or not you are familiar with good soil and water standards.

(d) An effective maintenance program should include ongoing modification to any *Plan* as development progresses. This is because such *Plans*:

(i) are usually based on a specific landform shape. However, as development proceeds, changes occur in slope gradients and drainage paths with their exact form frequently unpredictable before works begin; and

(ii) assume the site development works will proceed according to a specific set of engineering plans. However, these are often modified as part of the development process.

(e) Address ongoing maintenance of all permanent soil and/or water control structures in the planning phase. This is likely to be relevant, especially for some long-term works, where authority for maintenance passes from the developers/site operators and their contractors to, e.g. the local consent authority.

8.2 Maintenance Program

(a) Empty bins for concrete and mortar slurries, paints, acid washings, lightweight waste materials and litter at least weekly and otherwise as necessary. Dispose of any waste in an approved manner.

(b) Ensure proper drainage of the site. To this end:

(i) clean any catch drains, diversion banks, table drains, berm drains and drop-down structures (including inlet and outlet works) that have become

blocked through sediment pollution, sand/soil/spoil being deposited in or too close to them, breached by vehicle wheels,[1] etc.;

(ii) check that drains are operating as intended (Section 5.4), especially that:
- no low points exist which can overtop in a large storm event[2]
- areas of erosion are repaired (e.g. lined with a suitable material[3] and/or velocity of flow is reduced appropriately through construction of small check dams or installing additional diversions upslope);

(iii) construct small additional earth diversions[4] at distances of less than 80 metres across the works to keep slope lengths short and dispose of water without causing channel erosion; and

(iv) regularly clean out sediment trapped behind sediment fences and other traps.

(c) Ensure removal of any sand/soil/spoil materials placed closer than 2 metres from hazard areas, such as waterways, gutters, paved areas and driveways. Provide protection to receiving waters from any such materials placed more than 2 metres from hazard areas by implementing the required soil and water management practices.

(d) Check that rehabilitated lands have established sufficient ground cover to reduce the erosion hazard effectively and initiate repair as appropriate (Chapter 7). Note that:

(i) periodic applications of water are essential, especially in the first seven days from establishment on turfed areas and/or in hot, dry weather; and

(ii) further applications of seed and fertiliser might be necessary in areas of minor soil erosion and/or inadequate vegetative establishment.

Establish salt-tolerant species or apply other corrective measures where bare areas arise because of salinity in surface or ground water.

(e) Control excessive vegetative growth through mowing,[5] slashing or judicious use of biodegradable herbicides. This is especially important with waterways to control weeds and to maintain a cover that does not impede water flow, thereby causing flooding or accumulation of pools of stagnant water. Do not grade existing waterways and road verges unless part of a further rehabilitation program.

(f) Do not dispose of cleared vegetation by open burning on site. Preferred disposal options include chipping or mulching for future rehabilitation purposes, unless the presence of weed seed or viable vegetation parts makes this not viable. Less preferred options include transport to a landfill facility, or trench-burning using licensed equipment.

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1. Redesigning any crossings to permit continued vehicle access without affecting the function of the drain might be necessary.
2. Either raise low points or, temporarily, line the downslope side with sandbags, straw bales, etc.
3. Including use of grass, plastic, geotextile, rock or concrete.
4. A single pass with a grader, constructing a diversion drain about 300 mm deep is usually adequate.
5. Set mower height no lower than 75 mm above the ground surface.

(g) Control emission of dust from unsealed roads and other exposed surfaces, such as unprotected earth or soil stockpiles, by use of surface sealants and/or water spray carts or other appropriate equipment. Keep the surfaces moist rather than wet.

(h) Keep all sediment detention systems in good, working condition. Ensure:

  (i) recent works have not resulted in the diversion of sediment-laden water away from them;

  (ii) degradable products (e.g. straw bales) are replaced as required;

  (iii) sediment is removed if the design capacity or less remains in the settling zone;

  (iv) retention basins on *Type C* soils have a minimum settling zone depth of at least 0.6 metres over two-thirds of the surface area when surcharging;

  (v) water in retention basins on *Type D* soils is treated with a flocculating agent following the requirements of Section 6.3 and Appendix E if the soils at the sediment source contain more than 10 percent dispersible materials.[6] Where basins require pumping out, the necessary dosing should occur within 24 hours of the conclusion of each storm event and the basin should be drained once suspended solids levels are less than 50 milligrams per litre, usually 36 to 48 hours later if gypsum is used. Longer or shorter treatment and dewatering periods may apply if rainfall events of duration other than 5 days has been adopted in the design of the basin;[7] and

  (vi) pollutants, sediment and/or waste removed from sediment basins, gross pollutant traps and trash racks are disposed in stabilised dumps where soil and water measures have been implemented to stop offsite movement of pollutants.

(i) To determine the effectiveness of any sediment retention basins, the consent authority might require the site manager to undertake sampling and subsequent analysis of non filterable residue (NFR) concentrations of waste water. Such sampling and analysis is likely to be required periodically or for a nominated period, usually the first three months after commissioning the basins.

(j) Dispose any pollutants removed from sediment basins in areas where further pollution to downslope lands and waterways should not occur.

(k) Construct additional erosion and/or sediment control works as might become necessary to ensure the desired protection is given to downslope lands and waterways, i.e. make ongoing changes to the Plan.

(l) Maintain erosion and sediment control measures until all earthwork activities are completed and the site rehabilitated.

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6. Where necessary, a suitably sized stockpile of flocculating agent should be kept onsite for the treatment of wastewater impounded in sediment retention systems.
7. Place a marker peg within each sediment retention basin to indicate the design capacity of the sedimentation zone and level above which capacity is available in the settling zone for containment of runoff.

(m) Temporary soil conservation structures/measures are to be removed and surfaces restored to the final landform as the last activity in the works program. Then, vegetative rehabilitation of these areas can begin following the requirements of the site rehabilitation/landscaping plan. First liaise with the relevant local government body where works:

- are likely to continue in the catchment and are not associated directly with the development
- include sediment retention basins.

This is to determine whether the local consent authority is prepared to take over control and responsibility for any such structures. Ongoing maintenance of sediment basins can be desirable where later works in the catchment not associated with this development are likely to produce sediment. If the local consent authority does agree to take such responsibility, the developer/site operator is expected to ensure that they are in good working order and design capacity is available.

(n) A self-auditing program should be established based on a Check Sheet (Table 8.1) developed for the specific site – note that every site will be different. A site inspection using the Check Sheet should be made by the site manager:

- at least weekly, and
- immediately before site closure, and
- immediately following rainfall events that cause runoff.

Undertake the self-audit by:

- walking around the site systematically (e.g. clockwise)
- recording the condition of every BMP employed
- recording maintenance requirements (if any) for each BMP
- recording the volumes of sediment removed from sediment retention systems, where applicable
- recording the site where sediment is disposed
- forwarding a signed duplicate of the completed Check Sheet to the project manager/ developer/ site operator for their information.

In particular, inspect:

- locations where vehicles enter and leave the site
- all installed erosion and sediment control measures, ensuring they are operating correctly
- areas that might show whether sediment or other pollutants are leaving the site or have the potential to do so
- all discharge points, to assess whether the erosion and sediment control measures are effective in preventing impacts to the receiving waters.

Tables 8.2, 8.3 and 8.4 are adapted from Fifield (2002b) and contain listings of suggested inspection guidelines that might apply. These listings are not intended to be complete and issues raised might vary from one site to another.

Keep a complete set of the Self-audit Check Sheets onsite and make them available to any officer of the local council, NSW DEC or other authorised person on request.

Table 8.1 Example of a Self-audit Check Sheet (part only)

Site Location:		
	Date Inspected:	
	Name:	
	Signature:	
BMP	Condition	Remarks
Basin 1	OK	No maintenance required
Basin 2	Contains Sediment (about 30 m^3)	Instructed J. Smith to remove it and dispose at the fill site
Silt fence 1	OK	No maintenance required
Silt fence 2	Breached for access	Instructed D. Brown to repair it
Etc.		

Table 8.2 Guidelines that might apply to inspection of structural measures

Sediment retention basins		
	·	has sediment settling zone sufficient capacity?
	·	is the outflow structure installed as illustrated in the *ESCP* or *SWMP* ?
	·	are the embankments protected against erosion?
Sediment filters		
Straw bales	·	are they installed in trenches?
	·	are they tightly abutting, with material stuffed between the bales?
	·	are they staked?
	·	has backfill material been placed on the upstream side?
	·	is runoff water running around, below, or between the bales?
Sediment fences	·	is the filter fabric buried in a trench and backfilled?
	·	are the stakes installed correctly with proper spacing?
	·	has sediment accumulated to within 300 mm of the top?
	·	is runoff water running around, below, or between the fabric joins?
Continuous berms	·	have the berms been installed correctly?
	·	is the fabric adequately stapled?
Other	·	are barriers causing local flooding problems?
Check dams		
Straw bales	·	are the bales staked and tight with each other?
	·	have the bales been installed in a trench and backfilled?
	·	will water be forced to run over a centre bale and not around the end bales?
	·	is the ground below where water flows over the bales eroding?
Rock	·	is the correct-size rock being used?
	·	will water flow over the middled instead of around the edges?
	·	Has movement of the rock occurred?
Drains/inlet protection		
Straw bales	·	are the bales staked and tight with each other?
	·	have the bales been installed in a trench and backfilled?
	·	will water be forced to run over a centre bale and not around the end bales?
	·	is the ground below where water flows over the bales eroding?
Filter fabric	·	is the filter fabric buried in a trench and backfilled?
	·	is it staked correctly with proper spacing?
	·	has sediment accumulated to within 300 mm of the top?
	·	is runoff water running around, below, or between the fabric joins?
Inserts	·	has the insert been installed correctly?
	·	will the insert prevent runoff water from entering the stormwater system?
	·	has sediment filled the structure? When will the sediment be removed?

Table 8.3 Guidelines that might apply to inspection of non-structural measures

Diversion and containment banks	· are they protected against erosion? · have they been constructed to control and divert anticipated flows? · should the bottom be lined with any material to prevent erosion?
Slope drains	· will runoff water be diverted into the pipe? · does sufficient protection exist to prevent failure of piping? · is the pipe anchored? · does erosion protection exist where water charges? · are they functioning in the manner they were designed?
Staging of construction	· does all the ground need to be disturbed? · how much land is being disturbed and how much can remain in vegetation?
Planting of perennial seed	· are drill marks evident that are parallel or perpendicular to land contours? · has seed tag been checked and the mixture verified? · if seed was applied hydraulically, how much was used? · if seed was broadcast, was the ground raked? · what time of year was the seed planted? · are weeds becoming established?
Planting of temporary, nursery, or cover crop	· what type of seed was used? · how long will the vegetation be in place before planting perennial grass? · when was the seed planted?
Dry/hydraulic mulch	· does the mulch cover 80-100% of the bare ground? · if dry mulch is applied, how is it held in place? · has wind removed the dry mulch and is this a problem?
Soil binder	· what type of material was used? · when was it applied? · does the material still control erosion?
Hillside protection by RECP	· is the material properly installed at the top? · are sufficient staples used? · does the material overlap along the edges? · does the material need to be repaired?
Channel protection by ECBS, TRMS, and C-TRMS	· is the material properly installed at the top? · are sufficient staples used? · is the material properly stapled or trenched along the edges? · should a rock check structure be installed on top of the material?

Table 8.4 Guidelines that might apply to the control of wind-borne particles

Soil roughening	·	how deep are the furrows?
	·	are the furrows filling up with soil?
	·	are the furrows perpendicular to the prevailing wind?
Wind barriers	·	have they been installed perpendicular to what is accepted as the prevailing wind direction?
	·	are they in need of repair or replacement?
	·	have the structures been placed where maximum deposition of wind-borne particles can occur?
Vegetation	·	is the ground bare?
	·	how tall and/or dense is the vegetation?
Hydraulic mulch/soil binder	·	has sufficient material been applied?
	·	how long will the material be expected to control erosion?
	·	has the material broken down, and is it still effective?

8.3 Post Construction Issues

(a) Whereas this manual deals in the main with the construction phase, there are some post construction issues that should be considered to ensure the construction phase is concluded in a responsible manner. This will apply to both subdivision works and building works.

(b) Issues to be considered include:

(i) Ensure revegetation and planting areas have been properly established, including areas occupied by all temporary erosion and sediment control structures.

(ii) Liaise with the local consent authority to determine whether the ownership and ongoing responsibility for any structures (e.g. sediment basins) can transfer to it.

(iii) Remove all treatment techniques or structures that are no longer required in a way that complies with:

- safety standards
- consent conditions
- requirements that sediment and other materials are disposed in an approved manner
- sound construction principles.

(iv) Ensure site access is returned to its original condition or approved final layout depending on site-specific circumstances.

(v) Transfer of any temporary works to permanent works. This might include the removal of sediment from a sediment basin that is to be transferred to the control of the local consent authority as either a permanent sediment basin or upstream section of a permanent wetland.

Chapter 9

URBAN CONSTRUCTION SITES

9. Urban Construction Sites

9.1 Preamble

Information of particular relevance to urban construction sites is contained in this Chapter. It highlights relevant issues contained elsewhere in Chapters 1 to 8 of these guidelines that should be consulted. Specialised information relating to quarries and open-cut mining sites, waste disposal sites, major road and highway construction, access tracks in bushland, and installation of services is in Volume 2 of these guidelines.

9.1.1 Purpose, Scope and Objectives

(a) This chapter helps land developers to apply the information contained in Chapters 1 to 8 of this document to urban development activities in New South Wales where more than 250 square metres will be disturbed. While it focuses on both the subdivision and subsequent building construction stages, the information applies to all similar activities. It integrates best practice techniques to ensure that any land disturbance activities cause minimal harm to the environment, especially the receiving waters. Guidance in relation to the planning and implementation of post construction (permanent) stormwater management measures, including water sensitive urban design' techniques, is provided in *Managing Urban Stormwater: Urban Design.*

(b) Not all relevant planning, design, construction, rehabilitation and maintenance information is contained here, but it does contain an overview of many more commonly applied practices and model plans for guidance. The intention is not to hinder individual intuitive approaches that might apply to specific situations.

(c) All those involved in land disturbance activities should consider the relevant legislative requirements (Appendix K), Local Environmental Plans, Development Control Plans, Regional Environmental Plans and State Environmental Planning Policies before beginning the planning process.

9.1.2 Temporary Measures

(a) Often, urban construction sites have limited space and, consequently, developing full soil and water management programs can be difficult. Despite this, measures should still be undertaken for control of pollution of waters[1] by:

- sediment
- concrete slurry, acid washes, paints, solvents, adhesives
- pesticides
- litter.

1. Here, "waters" means any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea), or part thereof, and includes water stored in artificial works, water in water mains, water pipes and water channels, and any underground or artesian water, or any part thereof.

This is in addition to the presence of any soil and water management works put in place elsewhere by other developers to protect the subdivision stage.

(b) Urban construction sites in fully developed, inner city areas (infill development) can provide difficulties in controlling pollution of stormwater systems. Often, avoiding destruction of the protective ground cover over the entire site is extremely difficult (figure 9.1). Works on these sites need careful management of activities to prevent sediment pollution. However, specific measures can be taken to mitigate the threat of pollution, such as:

(i) Stockpiling materials on site where possible and containing the material with a sediment fence;

(ii) Covering materials with plastic sheeting, geosynthetic materials or soil binders to reduce the impact of wind and water if other protective measures are impractical;

(iii) Where material can only be stored on the footpath and/or road area and Council approval is received, ensuring:

- a gutter flow bypass is provided with pipes laid in the gutter to convey water past the material
- downstream pit protection is provided to prevent material from entering the drainage system
- pedestrian and vehicular safety and warning devices are erected where appropriate
- the above measures are regularly maintained.

(iv) Limiting the amount of material on site to that required for the tasks immediately at hand. Delivery of smaller quantities of materials will make managing the site easier;

(v) Ensuring all material is immediately removed from the site when practical to do so and at the completion of work; and

(vi) Instructing site workers on the need to prevent materials from washing or blowing into the stormwater system or elsewhere.

(c) Other temporary site management techniques that should be applied during construction include:

(i) advising site workers, subcontractors and delivery drivers of their responsibilities to minimise the potential for soil erosion and pollution to downslope lands and waterways;

(ii) where possible, requiring any staff, contractors or subcontractors to maintain all erosion and sediment control devices in good order and replacing damaged sections as appropriate;

Figure 9.1 Typical medium-density, inner-city construction site.

(iii) placing non erodible materials (e.g. timber) in the gutter to help entry to the site [2]

(iv) permitting only approved machinery for travel within watercourses and drainage lines;

(v) where practical to do so, requiring utility groups to undertake common trenching, conduit installation and backfilling for the whole project area continuously until completion;

(vi) ensuring all staff facilities are properly installed and maintained so that pollutants, including wash water, are not conveyed from the site in stormwater. Urge staff to use proper toilet facilities provided;

(vii) controlling discharge of sediment and/or other pollutants from dewatering (site pump-out) activities. Polluted water may need to be treated on-site before being discharged to the stormwater system. Special care is needed where groundwater is or could be contaminated;

(viii) providing approved bins for concrete and mortar slurries, paints, acid washes, lightweight waste and litter, and ensuring their regular clearance;

(ix) ensuring that any poisons are applied according to their registration and instructions carried on the label (e.g. for termite control);

(x) ensuring safeguards are in place to prevent residue paint and other chemicals from entering the stormwater system. Spray painting, high-pressure washing and

2. The placement of erodible materials (e.g. spoil) in the gutter is contrary to the Protection of the Environment Operations Act, 1997, and is not permitted.

other activities that may permit airborne particles to dissipate to waterways should be carefully controlled. Use of less hazardous material is encouraged;

(xi) applying sound material management practices in relation to the storage and handling. Sound practices include storing materials in designated locations, installing secondary containment bunds, regularly inspecting storage areas and training site personnel in correct practices. Procedures should also be established to clean up any spills correctly and considerate of the appropriate legislation, e.g. Protection of the Environment Operations Act, 1997 (Appendix K);

(xii) instigating responsible vehicle and equipment maintenance and servicing practices. Washing of vehicles and equipment should be restricted with off-site commercial facilities favoured. Any necessary washing on-site should be contained to specific bunded wash areas. Biodegradable detergents should be used. Care should be exercised with steam cleaning operations that might discharge pollutants to the air; and

(xiii) ensuring safe vehicle and equipment refuelling procedures are instigated. Fuel storage areas should be covered and spills should be prevented with proper containment areas established. Equipment leaks should be eliminated as part of a regular equipment maintenance program.

9.1.3 Permanent Measures.

(a) Generally, permanent soil conservation measures should be carried out as part of the landscape design and specification at the conclusion of works. These should result in bringing potential soil losses to extremely low levels (<10 t/ha/yr) and ensure high levels of protection from the effects of sheet flow, concentrated flow and mass movement. They should incorporate any flood mitigation measures required by council and integrate landscape and hydraulic design to optimise stability and amenity values.

(b) Control the erosive effects of sheet flow by:

(i) paving permanent driveways and parking areas as soon as possible after their construction; and

(ii) stabilising other areas as soon as possible after final shaping, with plants, mulches, geosynthetic materials, soil binders or similar techniques.

(c) Rehabilitating slopes steeper than 2(H):1(V) by vegetative means is very difficult and alternate methods are usually required, particularly to control the movement of soil materials by gravitational colluvial action. However, control can be achieved in various ways, including through:

- regular irrigation (controlled application to prevent slumping)
- cellular containment systems

- riprap
- construction of retaining walls (using rock, or geosynthetic materials discussed at Appendix D), etc.

A qualified engineer should design any retaining wall more than 1 metre in height.

9.2 Residential Dwelling Requiring an *ESCP*

9.2.1 Introduction

(a) *ESCP*s are plans showing how to minimise erosion and trap sediment resulting from minor construction or building activities. They are required on all sites where between a total of 250 square metres and 2,500 square metres are to be disturbed in urban construction programs (Chapter 2).

(b) The complexity of *ESCP*s will vary with the nature and scale of the development, particularly the likely amount of ground disturbance. They should be "stand alone" documents, consisting of drawings and notes that can be easily understood by site personnel and the consent authority. Section 2.2 contains listings of information required on the drawings and commentary that comprise *ESCP*s.

(c) Figures 9.2 and 9.3 show two patterns for house construction that might help guide the preparation of an *ESCP*. Of course, these drawings are not intended to cover all situations and variations from them are expected in many cases. For example, leaving the rear of many residential blocks in a vegetated condition is often not possible because of lack of space, so the entire block might need to be disturbed. Nevertheless, the footpath and adjacent blocks should rarely be disturbed and, then, only when essential, e.g. drainage works on the footpath. Where they are disturbed, they should remain in a condition of a high erosion hazard for as short a period as practicable.

9.2.2 Model *ESCP* for a Residential Dwelling

The *ESCP* Commentary:

1. Site works will not start until the erosion and sediment control works outlined in clauses 2 to 4, below, are installed and functional.
2. The ingress to and egress from the site will be confined to one stabilised point. Sediment or barrier fencing will be used to restrict all vehicular movements to that point. Stabilisation will be achieved by either:
    - constructing a sealed (e.g. concrete or asphalt) driveway to the street
    - constructing a stabilised site access, according to Standard Drawing SD 6-14

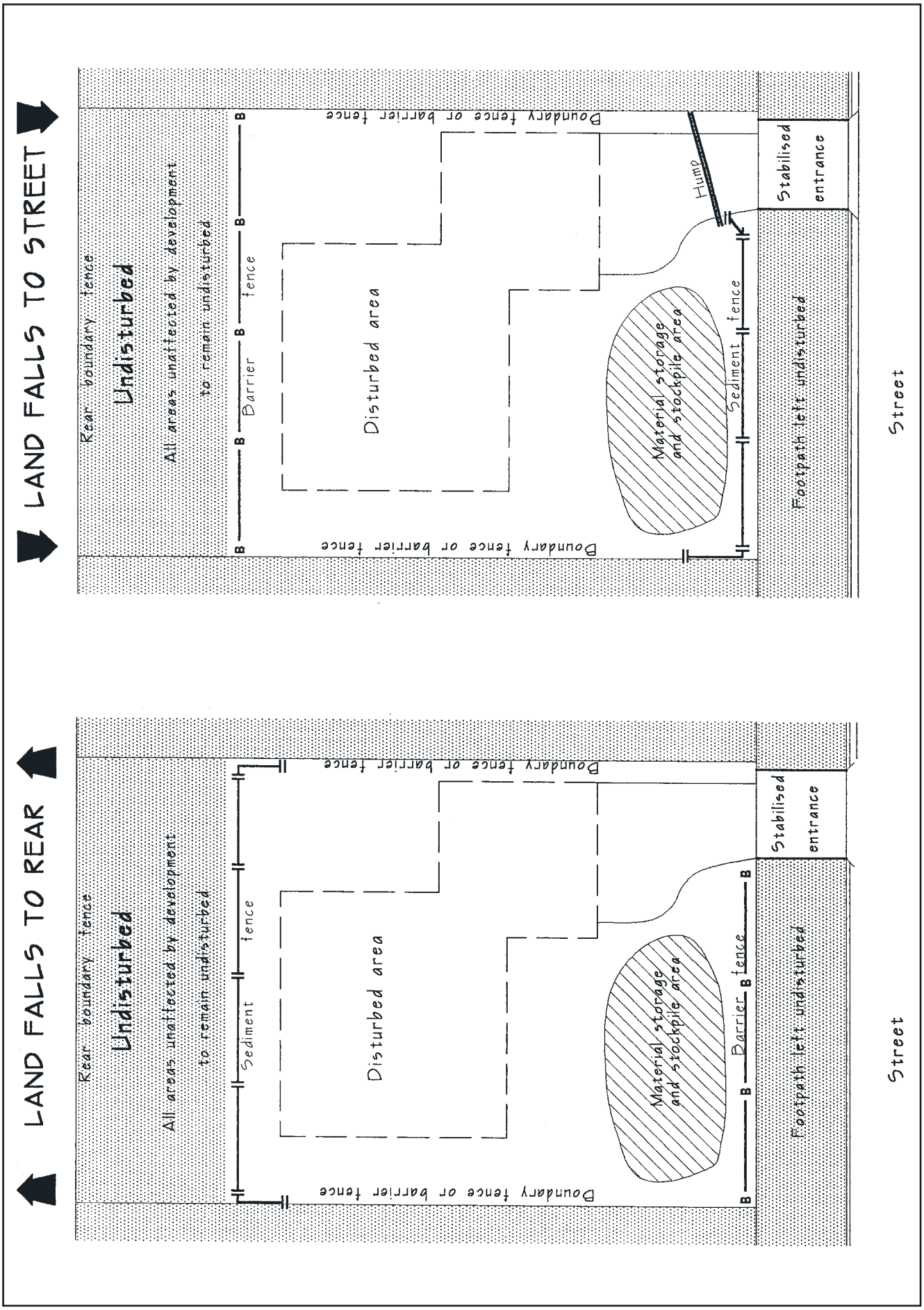


Figure 9.2 Two options for an ESCP where the site flows from the front and to the rear of the site

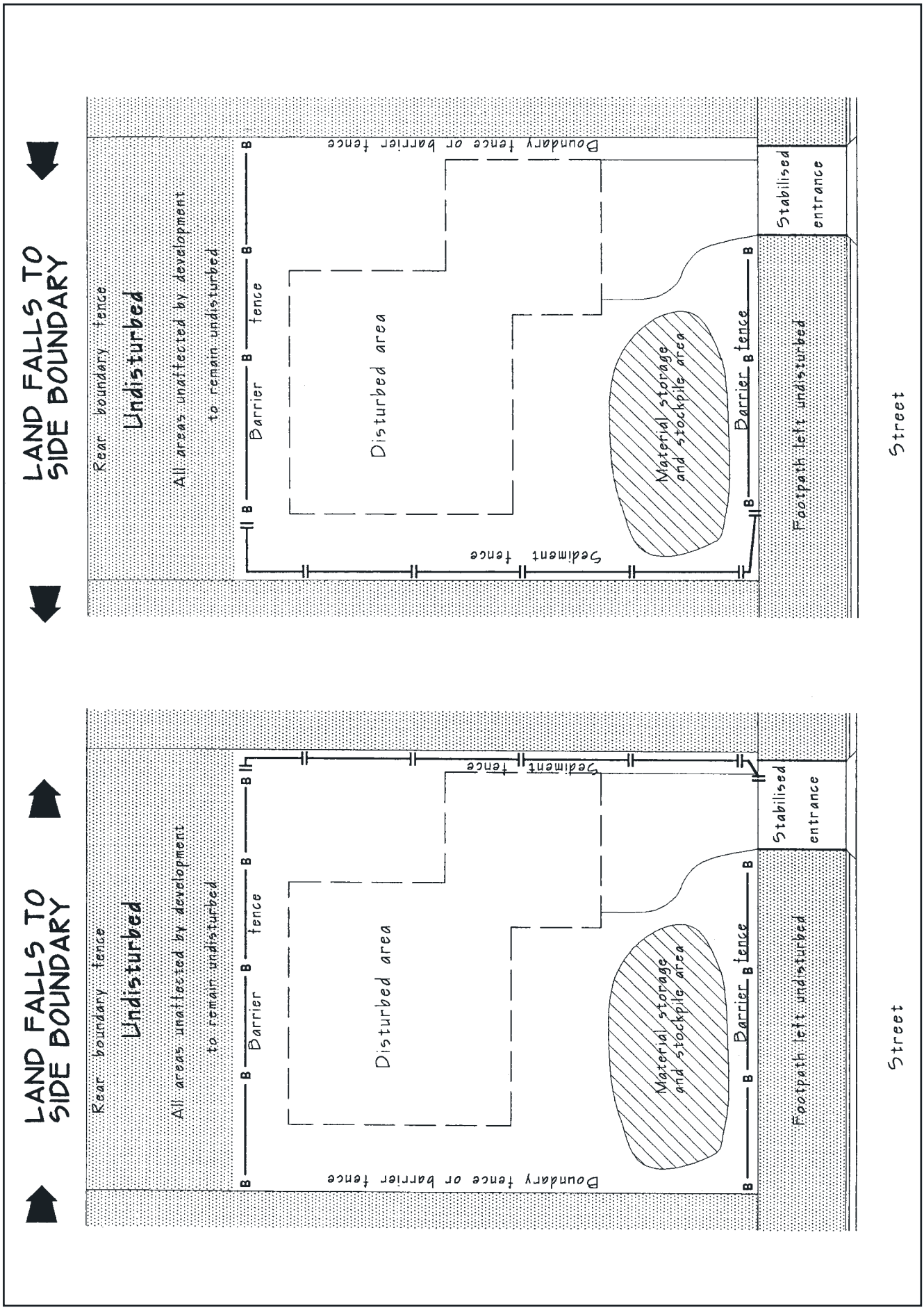


Figure 9.3 Two options for an ESCP where the site flows to either side of the site

or other suitable technique approved by the Council.

3. Sediment (SD 6-8) and barrier fences will be installed as shown on the attached drawing.
4. Mesh and gravel "sausage" protection (SD 6-11) will be provided to protect gutter inlets near the allotment.
5. Topsoil will be stripped and stockpiled (SD 4-1) for later use in landscaping the site.
6. All stockpiles will be placed in the location shown on the *ESCP* and at least 2 metres clear of all areas of possible areas of concentrated water flow, including driveways.
7. Lands to the rear and sides of the allotment and on the footpath will not be disturbed during works except where essential, e.g. drainage works across the footpath. Where works are necessary, they will be undertaken in such a way to leave the lands in a condition of high erosion hazards for as short a period as practicable. They will be rehabilitated as soon as possible. Stockpiles will not be placed on these lands and they will not be used as vehicle parking areas.
8. Approved bins for building waste, concrete and mortar slurries, paints, acid washings and litter will be provided and arrangements made for regular collection and disposal.
9. Guttering will be connected to the stormwater system (or rainwater tank, if present) as soon as practicable. If a rainwater tank is installed, the tank overflow should be connected to the stormwater system as soon as practicable.
10. Topsoil will be respread and all disturbed areas will be rehabilitated within 20 working days of the completion of works.
11. All erosion and sediment controls will be checked at least weekly and after rain to ensure they are maintained in a fully functional condition.
12. Photocopies of the following Standard Drawings are appended to this commentary:
    - SD 4-1 Stockpile Management
    - SD 5-5 Earth Bank, Low Flow
    - SD 6-8 Sediment Fence
    - SD 6-11 Mesh and Gravel Inlet
    - SD 6-14 Stabilised Site Access.
13. A drawing of the site showing the erosion and sediment control works is attached to this commentary (figure 9.4):

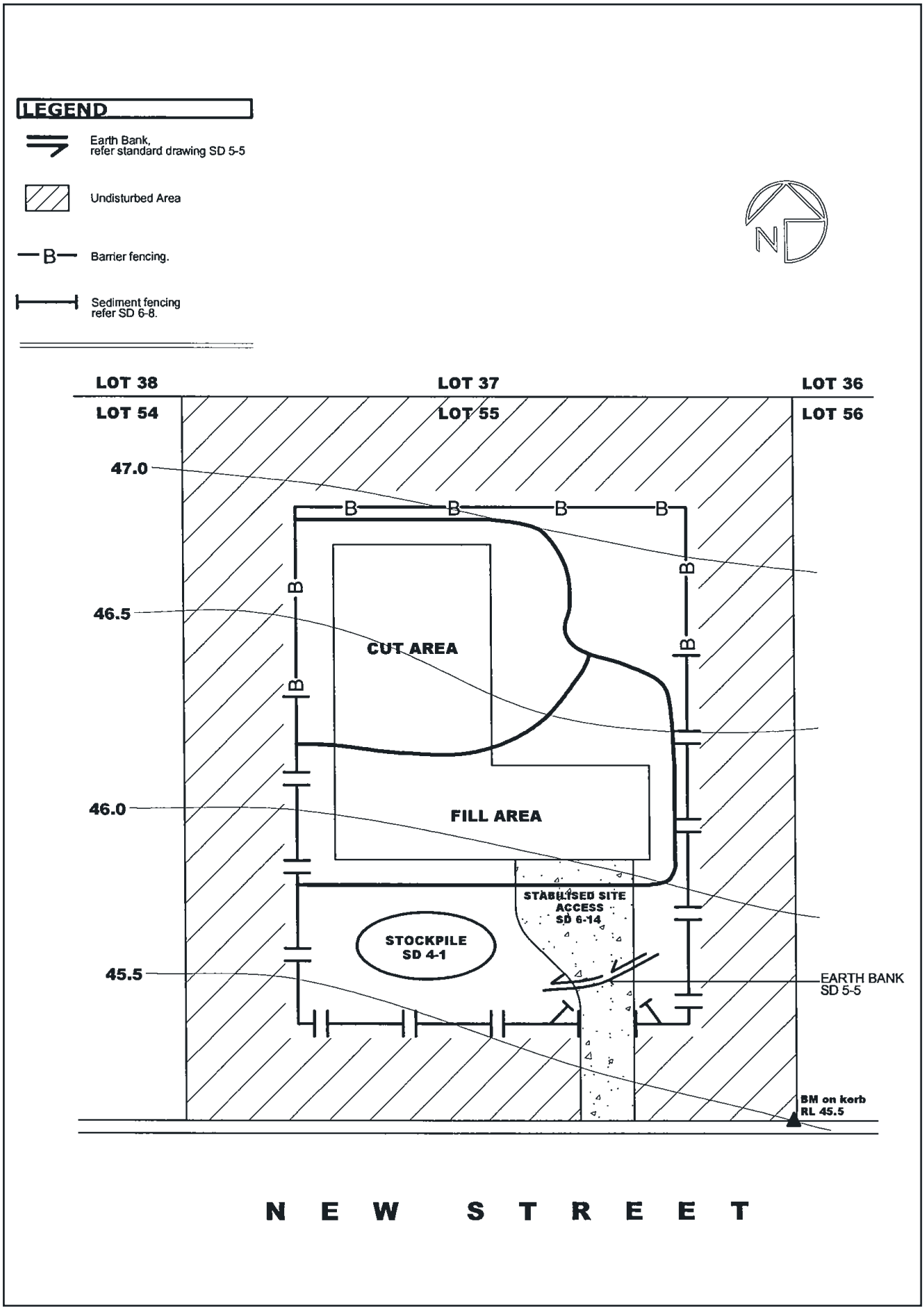


Figure 9.4 Erosion and sediment control plan for a residential dwelling

9.3 Medium-density Development Requiring a *SWMP*

9.3.1 Introduction

(a) Plans showing how erosion and sediment will be controlled on larger (>2,500 square metres disturbed) sites require a *SWMP* as outlined in Chapter 2.

(b) All *SWMP*s should include the relevant calculations of capacities for any sediment basins and other structures. These calculations should be:

- based on an assessment of site-specific data
- account for the pollution potential of the site
- consider the sensitivity of receiving waters and other ESD matters.

(c) The example here has been prepared for a site with landscape, soil and rainfall characteristics typical of suburban Sydney. It:

- deals with the construction of eight town houses on 4,500 square metres
- involves disturbing about 3,000 square metres of land
- is based on data that is readily available from government and local government agencies throughout Sydney.

(d) The model SWMP below was chosen because the site falls above the A-line in figure 4.6 and shows the complexity expected where the erosion hazard is high. Had slope gradients not exceeded 6 percent, the site would have fallen below the A-line and much of the detail that follows would not be required, including some relating to or derived from the RUSLE (Section 4.4.2).

9.3.2 Model *SWMP* for a Medium-density Development

Background

1. Site constraints and characteristics criteria are identified in Table 9.1.
2. The likely soil loss is calculated with the Revised Universal Soil Loss Equation (RUSLE). The values of the other RUSLE factors are: LS range of 0.31 to 1.75 (assuming a slope length of 40 m and a gradient range of 2 to 10%), P of 1.3, and the C is assumed to be 1.0 for bare soil. The site is on the Gymea Soil Landscape with Gy1, Gy2 and Gy3 soil materials (Chapman and Murphy, 1989) being identified through a preliminary investigation.
3. The design capacity for possible sediment basins for the total site is 85 cubic metres (Attachment). However, the estimated annual average soil loss is calculated to be 78 cubic metres using the RUSLE, which is less than 150 cubic metres; so a sediment basin is not required at this site.
4. Given that the site is Soil Loss Class 3 and these are not waterfront lands, no constraints on the timing of development occur at this site.

Table 9.1 Constraints and characteristics

Constraint/opportunity	Value
Rainfall erosivity	moderate (R-factor = 3,690)
Slope gradients	moderate (up to 10%)
Potential erosion hazard	high (from figure 4.6 in Landcom (2004))
Rainfall Zone	Zone 1
Soil erodibility	low to moderate (highest K-factor = 0.026)
Calculated soil loss	260 tonnes/ha/yr
Soil Loss Class	Class 3
Soil texture group	Type C (11 to 30% <0.02 mm)
Percent dispersible (subsoil)	insignificant (0 to 2% dispersible, Emerson Classes 6, 7 and 8)
Runoff coefficient	0.5 adopted
Disturbed site area	3,000 m2

General Instructions

5. The *SWMP* (Drawing 922969) will be read with the engineering plans and any other plans or written instructions that may be issued and relating to development at the subject site.
6. Contractors will ensure that all soil and water management works are undertaken as instructed in this specification and constructed following the guidelines stated in *Managing Urban Stormwater: Soils & Construction* (Landcom 2004).
7. All subcontractors will be informed of their responsibilities in reducing the potential for soil erosion and pollution to downslope areas.

Land Disturbance Conditions

8. Where practicable, the soil erosion hazard on the site will be kept as low as possible and as recommended in Table 9.2.
9. Works will be undertaken in the following sequence:
   (i) Install all barrier and sediment fencing where shown on Drawing 922969 to detail on Standard Drawing (SD) 6-8;
   (ii) Construct the stabilised site access next to the eastern boundary to detail shown on SD 6-14;
   (iii) Construct the rock lined drain on the western boundary;

Table 9.2 Limitations to access

Land use	Limitation	Comments
Construction areas	Disturbance to be no further than five (preferably two) metres from the edge of any essential engineering activity as shown on the plans	All site workers will clearly recognise these zones that, where appropriate, are identified with barrier fencing (upslope) and sediment fencing (downslope), or similar materials
Access areas	Limited to a maximum width of 10 metres	The site manager will determine and mark the location of these zones onsite. They can vary in position to best conserve the existing vegetation and protect downstream areas while being considerate of the needs of efficient works' activities. All site workers will clearly recognise their boundaries that, where appropriate, are marked with barrier mesh, sediment fencing, or similar materials
Remaining lands	Entry prohibited except for essential thinning of plant growth	Thinning of growth might be necessary for fire hazard reduction

(iv) Construct low flow earth banks where shown on Drawing 922969 and to detail on SD 5-5;

(v) Install wind break fencing (SD 6-15) where shown on the Drawing 922969;

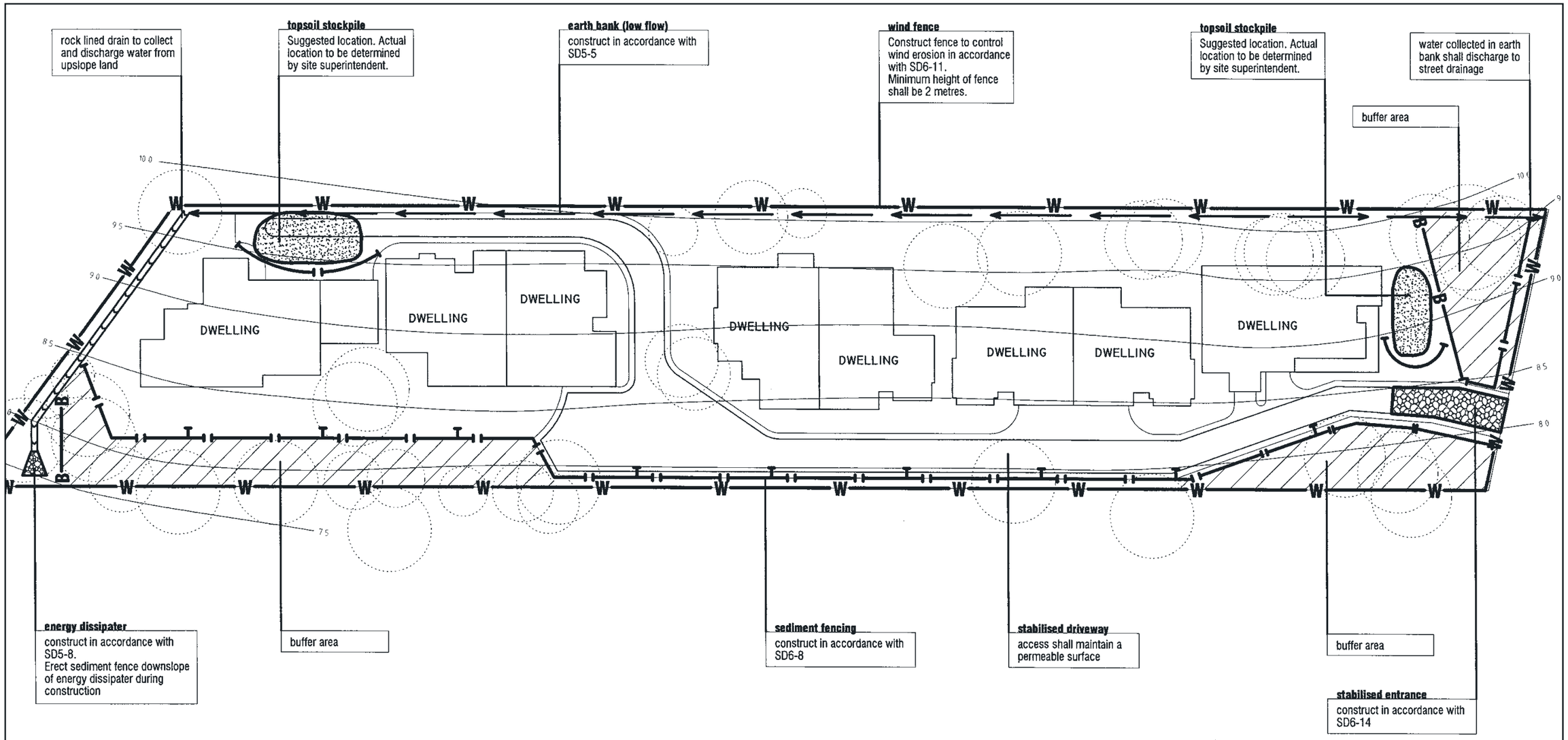
(vi) Install mesh and gravel filters (SD 6-11) at downslope kerb inlets;

(vii) Install geotextile inlet filters (SD 6-12) around all drop inlets onsite;

(viii) Clear the site and strip and stockpile the topsoil in the locations shown on Drawing 922969 following SD 4-1;

(ix) Undertake all essential construction works ensuring that roof stormwater systems are connected to permanent drainage as soon as practical;

(x) Grade lot areas to final grades and apply permanent stabilisation (landscaping) within 20 days of completion of construction works; and



legend

soil and water management	
W——W	wind fence
B——B	barrier fence
———	sediment fence
——→	earth bank
	leader spreader
	rock lined drain

notes

The following standard drawings shall be used in conjunction with this plan;

- SD4-1 Stockpiles
- SD5-5 Earth Bank (low flows)
- SD5-8 Energy Dissipater
- SD6-14 Stabilised Site Access
- SD6-8 Sediment Fence
- SD6-15 Control of Wind Erosion

Post development all banks, including those on driveways, are to be removed completely

PLAN
SOIL AND WATER MANAGEMENT PLAN

PROJECT
MEDIUM DENSITY DEVELOPMENT
NOBBS PLACE
WESTIN HEIGHTS

DRAWING SCALE	DRAWN	CHECKED
1:400 @ A3	I. Draw	B. Neat

DATE	DRAWING No
September 2003	922969

(xi) Remove temporary erosion control measures after the permanent landscaping has been completed.

Soil Erosion Control Conditions

10. Clearly visible barrier fencing will be installed where shown on Drawing 922969 and elsewhere at the discretion of the site superintendent to ensure traffic control and prohibit unnecessary site disturbance.

11. Earth batters will be constructed with as low a gradient as practicable but no steeper than:
    - 2(H):1(V) where slope length is less than 13 metres
    - 2.5(H):1(V) where slope length is between 13 and 17 metres
    - 3(H):1(V) where slope length is between 17 and 20 metres
    - 4(H):1(V) where slope length is greater than 20 metres.

12. All waterways, drains spillways and their outlets will be constructed to be stable in at least the 10 year ARI, time of concentration storm event.

13. Protection from erosive forces will be undertaken on all lands to meet the requirements of Table 9.3.

14. A suggested listing of plant species for temporary cover in areas of sheet flow is shown in Table 9.4. Reinforced Kikuyu turf is suggested for use in waterways. Wherever practicable, foot and vehicular traffic will be kept away from rehabilitated areas.

15. Permanent rehabilitation will achieve a *C*-factor of less than 0.1 and set in motion a program that should ensure it will drop permanently, by vegetation, paving, armouring, etc. to less than 0.05 within a further 60 days. Local water restrictions permitting, lands that have been newly planted with grass species will be watered regularly until an effective cover has established and plants are growing vigorously. Follow-up seed and fertiliser will be applied as necessary in areas of minor soil erosion and/or inadequate vegetative protection.

16. The revegetation will be aimed at reestablishing natural species. Therefore, the natural surface soils will be replaced and non persistent annual cover crops will be used.

Sediment Control Conditions

17. Sediment fences (SD 6-8) will:

    (i) be installed where shown on Drawing 922969 and elsewhere at the discretion of the site superintendent to contain the coarser sediment fractions (including aggregated fines) as near as possible to their source; and

Table 9.3 Maximum C-factors at Nominated Times During Works

Lands	Maximum C-factor	Remarks
Waterways and other areas subjected to concentrated flows, post construction	0.05	Applies after ten working days from completion of formation and before they are allowed to carry any concentrated flows. Flows will be limited to those shown in Table 5.1 of Managing Urban Stormwater – Soils & Construction, Landcom (2004). Foot and vehicular traffic will be prohibited in these areas (70% ground cover)
Stockpiles, post-construction	0.1	Applies after ten working days from completion of formation. Maximum C-factor of 0.10 equals 60% ground cover
All lands, including waterways and stockpiles during construction	0.15	Applies after 20 working days of inactivity, even though works might continue later. Maximum C-factor of 0.15 equals 50% ground cover

Table 9.4 Plant Species for Ground Cover

Sowing season	Seed mix
Autumn / Winter	oats @ 40 kg/ha
	Japanese millet @ 10 kg/ha
Spring / Summer	Japanese millet @ 20 kg/ha
	oats @ 20 kg/ha

(ii) have catchment areas not exceeding 900 square metres, a storage depth (including both settling and settled zones) of at least 0.6 metres, and internal dimensions that provide maximum surface area to passage of stormwater (i.e. very low gradient).

18. Sediment removed from any trapping device will be relocated where further pollution to downslope lands and waterways cannot occur.

19. Stockpiles (SD 4-1) will be placed where shown on Drawing 922969 and not within 5 metres of hazard areas including likely areas of high velocity flows such as waterways, paved areas and driveways.

20. Water will be prevented from directly entering the permanent drainage system with inlet filters (SD 6-11 or SD 6-12) unless it is relatively sediment free, i.e. the catchment area has been permanently landscaped and/or any likely sediment has been treated in an approved device. The actual locations of the inlet filters will be chosen by the Site Superintendent to protect the receiving waters best and, therefore, are not shown on Drawing 922969.

21. Temporary sediment traps will be retained until after the lands they are protecting, are completely rehabilitated.

Other Matters

22. Acceptable bins will be provided for any concrete and mortar slurries, paints, acid washing, lightweight waste materials and litter. Clearance services will be provided weekly.

Site Inspection and Maintenance Conditions

23. Waste bins will be emptied as necessary. Disposal of waste will be in a manner approved by the site superintendent.

24. The site superintendent will inspect the site at least weekly and will:

    (i) ensure that drains operate properly and to effect any necessary repairs;

    (ii) remove spilled sand or other materials from hazard areas, including lands closer than five metres from areas of likely concentrated or high velocity flows especially waterways and paved areas;

    (iii) remove trapped sediment whenever less than design capacity remains within the structure;

    (iv) ensure rehabilitated lands have effectively reduced the erosion hazard and to initiate upgrading or repair as appropriate;

    (v) construct additional erosion and/or sediment control works as might become necessary to ensure the desired protection is given to downslope lands and

waterways, i.e. make ongoing changes to Drawing 922969 where it proves inadequate in practice or is subjected to changes in conditions on the work-site or elsewhere in the catchment;

(vi) maintain erosion and sediment control measures in a fully functioning condition until all earthwork activities are completed and the site is rehabilitated; and

(vii) remove temporary soil conservation structures as the last activity in the rehabilitation program.

25. As a part of the statutory "diligence and care" responsibilities, the site superintendent will keep a logbook, making entries at least weekly, immediately before forecast rain and after rainfall. Entries will include:

(i) the volume and intensity of any rainfall events;

(ii) the condition of any soil and water management works;

(iii) the condition of vegetation and any need to irrigate;

(iv) the need for dust prevention strategies; and

(v) any remedial works to be undertaken.

The book will be kept on-site and made available to any authorised person on request. It will be given to the project manager at the conclusion of works.

Attachment: Sediment Basin Volume Calculation

Basin volume = settling zone volume + sediment storage volume

Settling Zone Volume

The settling zone volume for Type C Soils is calculated to provide capacity to allow the design particle (i.e. 0.02 mm) to settle in the peak flow expected from the design storm (i.e. the 3-month storm). The volume of the basin's settling zone (V) can be determined as a function of the basin's surface area and depth to allow for particles to settle.

Peak flow for the 3-month storm is given by the Rational Formula:

$$Q_{tc,\,0.25} = 0.5 \times (0.00278 \times C_{10} \times F_1 \times I_{1yr} \times A)\ m^3/sec$$

where:

$Q_{tc,\,0.25}$	= flow rate (m^3/sec) for half the one year storm event (Section 6.35(c))
0.5	= a conversion factor to derive half 1-year event
C_{10}	= runoff coefficient (dimensionless) for ARI of 10 years (=0.8)
F_1	= frequency factor for 1 year (= 0.62)
$I_{1yr,\,tc}$	= average rainfall intensity (mm/hr) for the 1 year, storm event (= 92.2)
A	= area of catchment in hectares (ha) (= 0.45)

$$Q_{tc,\,0.25} = 0.5 \times 0.00278 \times C_{10} \times F1 \times I_{1yr,\,tc} \times A\ (m^3/sec)$$

$$Q_{tc,\,0.25} = 0.5 \times 0.00278 \times 0.8 \times 0.62 \times 92.2 \times 0.45\ (m^3/sec)$$

$$= 0.0286\ m^3/sec$$

The basin surface area is dependent on the flow rate into the basin (0.0286 m^3/sec) and the size of the design sediment particle, taken here as 0.02 mm.

Basin surface area = 4,100 x 0.0286
= 120 m^2

The basin settling volume can be calculated using a minimum depth of 0.6 metres.

Settling zone volume = basin surface area x depth
= 120 x 0.6
= 72 m^3

Sediment Storage Volume

The sediment storage zone is calculated as the largest of 100 percent of the capacity of the settling zone and two months soil loss as calculated by the RUSLE. The settling zone volume is 72 m^3 while two months soil loss is:

Sediment storage zone *Type C* = 0.17 x A (R x K x LS x 1.3 x 1.0) / 1.3
= 0.17 x 0.45 (3,690 x 0.026 x 1.75 x 1.3 x 1.0) / 1.3
= 13 m^3

Total basin volume = settling zone volume + sediment storage volume
= 72 + 72
= 144 m^3

The calculated average annual soil loss of 78 m^3 (13 x 6) is less than the limiting size of 150 m^3. Therefore, on this site a sediment basin is not required. Successful containment and control of sediment is to be attained through the use of other on site treatment techniques.

Photocopies of the following Standard Drawings are appended to these notes:

SD 4-1	Stockpiles
SD 5-5	Earth bank (low flows)
SD 5-8	Energy dissipater
SD 6-4	Stabilised site access
SD 6-8	Sediment fence
SD 6-11	Mesh and gravel inlet filter
SD 6-12	Geotextile inlet filter
SD 6-15	Control of wind erosion.

9.4 Subdivision Development Requiring a SWMP

9.4.1 Model SWMP for a Subdivision Development

Introductory Notes

(a) The model *SWMP* below is based on a development proposal in the Sydney area. Here, we have given the site the fictitious name of Sunshine Heights. It included the subdivision of building allotments, construction of road access and bridge works and installation of underground services. The total area affected by this development was 4 hectares with 2.1 hectares to be disturbed.

(b) The original proposal for soil and water management included several post development water quality control systems, e.g. installing the wetland component of a water quality control pond (WQCP) and gross pollutant trap. However, these guidelines only address the control of soil erosion and sediment pollution during the construction and site rehabilitation phases and not to work post development. In line with this focus, the model *SWMP* included here only addresses the construction and rehabilitation phase works.

(c) The model SWMP below was chosen because the site falls above the A-line in figure 4.6 and shows the complexity expected where the erosion hazard is high. Had slope gradients not exceeded 9 percent, the site would have fallen below the A-line and much of the detail that follows would not be required, including some relating to or derived from the RUSLE (Section 4.4.2).

Model Soil & Water Management Plan (*SWMP*)

1. This is a conceptual *SWMP* only. It provides sufficient detail to show clearly that the works can proceed without undue pollution to receiving waters. A detailed Plan will be prepared once consent is given and before works start.
2. Important site constraints and characteristics criteria are identified in Table 9.5.
3. The values of RUSLE factors not listed in Table 9.5 are:

   (i) LS-factor is 2.81, assuming slope length of 80 metres and typical upper slope gradients for works areas of 10 percent;

   (ii) P-factor is 1.3; and

   (iii) the *C*-factor is assumed to be 1.0 for bare soil.

   The site is on the Lambert Soil Landscape (Chapman and Murphy, 1989) with la1, la2 and la3 soil materials being identified through a preliminary soil survey. While la6 was not found in the soil survey, investigations were not detailed enough to preclude its existence and it is assumed to be present throughout.
4. The settling zone volume of the sediment basin will be calculated using the containment of the 5-day, 75th percentile rainfall event.
5. A volumetric runoff coefficient of 0.5 is adopted, in this instance, a conservative value.

Table 9.5 Constraints and characteristics

Constraint/characteristic	Value/rating
Rainfall erosivity	moderate (R-factor is 2,500)
Slope gradient	moderate (up to 10 percent)
Potential erosion hazard	high (from figure 4.6 in Landcom (2004))
Rainfall Zone	Zone 1
Soil erodibility (subsoil)	low to moderate (0.016 to 0.036)
Calculated soil loss	up to 330 t/ha/yr
Soil Loss Class	Class 3
Soil texture group	Type D
Percent dispersble (subsoil)	3 to 12 percent
Runoff coefficient	0.5 adopted
Total site area	4.0 ha
Disturbed site area	2.1 ha
75th %ile, 5-day rainfall event	Sunshine Heights = 18.6mm

General Instruction Conditions

6. The *SWMP* will be read with the engineering plans and any other plans or written instructions issued in relation to development at the subject site.
7. Contractors will ensure that all soil and water management works are undertaken as instructed in this specification and following the guidelines outlined in Managing Urban Stormwater: Soils & Construction (Landcom, 2004).
8. All subcontractors will be informed of their responsibilities in minimising the potential for soil erosion and pollution to downslope areas.

Land Disturbance

9. Where practicable, the soil erosion hazard on the site will be kept as low as possible and as recommended in Table 9.6.

Work Schedule Conditions

10. Works will be undertaken in the following sequence. Each subsequent stage is not to commence until the previous one is completed.

Table 9.6 Limitations to access

Land use	Limitation	Comments
Construction areas	Disturbance to be no further than five (preferably two) metres from the edge of any essential engineering activity as shown on the plans	All site workers will clearly recognise these zones that, where appropriate, are identified with barrier fencing (upslope) and sediment fencing (downslope), or similar materials
Access areas	Limited to a maximum width of 10 metres	The site manager will determine and mark the location of these zones onsite. They can vary in position to best conserve the existing vegetation and protect downstream areas while being considerate of the needs of efficient works' activities. All site workers will clearly recognise their boundaries that, where appropriate, are marked with barrier mesh, sediment fencing, or similar materials
Remaining lands	Entry prohibited except for essential thinning of plant growth	Thinning of growth might be necessary for fire hazard reduction
Work on waterfront lands	Generally, restricted to the period 1 June to 15 November	Where work is to occur outside the period 1 June to 15 November, *C*-factors will be above 0.1 only when the 3-day forecast suggests that rain is unlikely. Further, sufficient 350 gsm jute matting (or equivalent) will be available to reduce the *C*-factor to less than 0.1 should the forecast prove incorrect or rapid rehabilitation is required for any other reason

Stage 1 Conditions (refer to Drawings 922970-1 and 922970-2)

11. Construct stabilised site accesses (SD 6-14).
12. Install all barrier fencing to exclude access to the nominated restricted areas.
13. Construct Earth Banks 1, 2, 10, 11, and 12 (SD 5-6) to direct overland flow to lands beyond the site.
14. Provide temporary access to the four sediment basins on the alignment of the permanent roadways and protect this with sediment fencing (SD 6-8) or barrier fencing and Earth Bank 3 (SD 5-5). Note that it is not intended to start the road works set down for Stage 2 here.
15. Place sediment fences (SD 6-7) downslope of lands to be disturbed for construction of the sediment basins.
16. Construct Sediment basins 1, 2, 3, and 4 (SD 6-4). These basins do not need to be constructed in earth as shown in SD 6-4 but they must be constructed in impervious materials.
17. Construct Energy Dissipaters 1, 2, 3 and 4 (SD 5-8) at the outlet of each sediment basin.
18. Stabilise land surfaces disturbed by construction of the four sediment basins as soon as final levels are established.
19. Construct Earth Banks 4, 5, 6, 7, 8 and 9 (SD 5-6) to direct overland flow to the sediment basins.
20. Install Stormwater Pipes 1 and 2 and Energy Dissipaters 5 and 6. The passage of Stormwater Pipe 1 under the road and down the southern boundary of Lot 22 is temporary – it will join the road drainage in Stage 4 (pipe design parameters not included here).

Stage 2 Conditions (refer to Drawings 922970-1 and 922970-2).

21. Strip and stockpile topsoil (SD 4-1) from those lands to be exposed to construction activities.
22. Undertake road and drainage works according to the engineering plans – but see Condition 25, below and note the need to connect Earth Banks 5 to 8 and 6 to 7 in Stage 4 temporarily.
23. Once the access road shown upslope of Sediment Basin 1 has been constructed and the site stabilised, Stabilised Access 1 and Earth Banks 3 and 4 can be removed.
24. Once the road system east of the creek line has been completed and surrounding lands stabilised, Stabilised Access 2 can be removed.

25. Ensure all allotment and roadway stormwater drains to a sediment retention basin.

26. Where practical to do so, complete road and drainage works within the restricted area next to the creek (assumed to be waterfront lands) totally within the period 1 June to 15 November (see Condition 27, below where this is not practical). This includes installation of a WQCP, gross pollutant trap (GPT) and associated road-works (separate plans are available for completion of the WQCP and installation of the CDS device). Do not complete roadworks to the eastern abutment of the southern bridge until Stage 4. Ensure the road works do not hinder the flow in Earth Banks 7 and 8 – possibly requiring the construction of temporary culverts.

27. Where completing the requirements of Condition 26, above, is not practical, ensure all lands within the restricted area next to the creek, have *C*-factors above 0.1 only when the 3-day forecast suggests that rain is unlikely. Ensure provision of sufficient 350 gsm jute matting or equivalent (SD 5-2 and SD 5-7), to reduce the *C*-factor to less than 0.1 on all disturbed lands should the forecast prove incorrect or rapid rehabilitation is required for another reason.

Stage 3 Conditions (refer to Drawings 922970-3 and 922970-4)

28. Conditions 26 and 27 for Stage 2, above, apply to the whole of Stage 3.

29. Remove all sediment from Sediment Basins 3 and 4. Decommission Sediment Basins 3 and 4 and the associated energy dissipaters.

30. Construct the creek diversion around the eastern side of the proposed WQCP.

31. Construct Phase 1 of the WQCP (details are provided in a separate set of plans). Note that the wetland component of this structure is to operate as Sediment Basins 5 and 6 until Stage 6 and replace Sediment Basins 1, 2, 3 and 4. This requires:

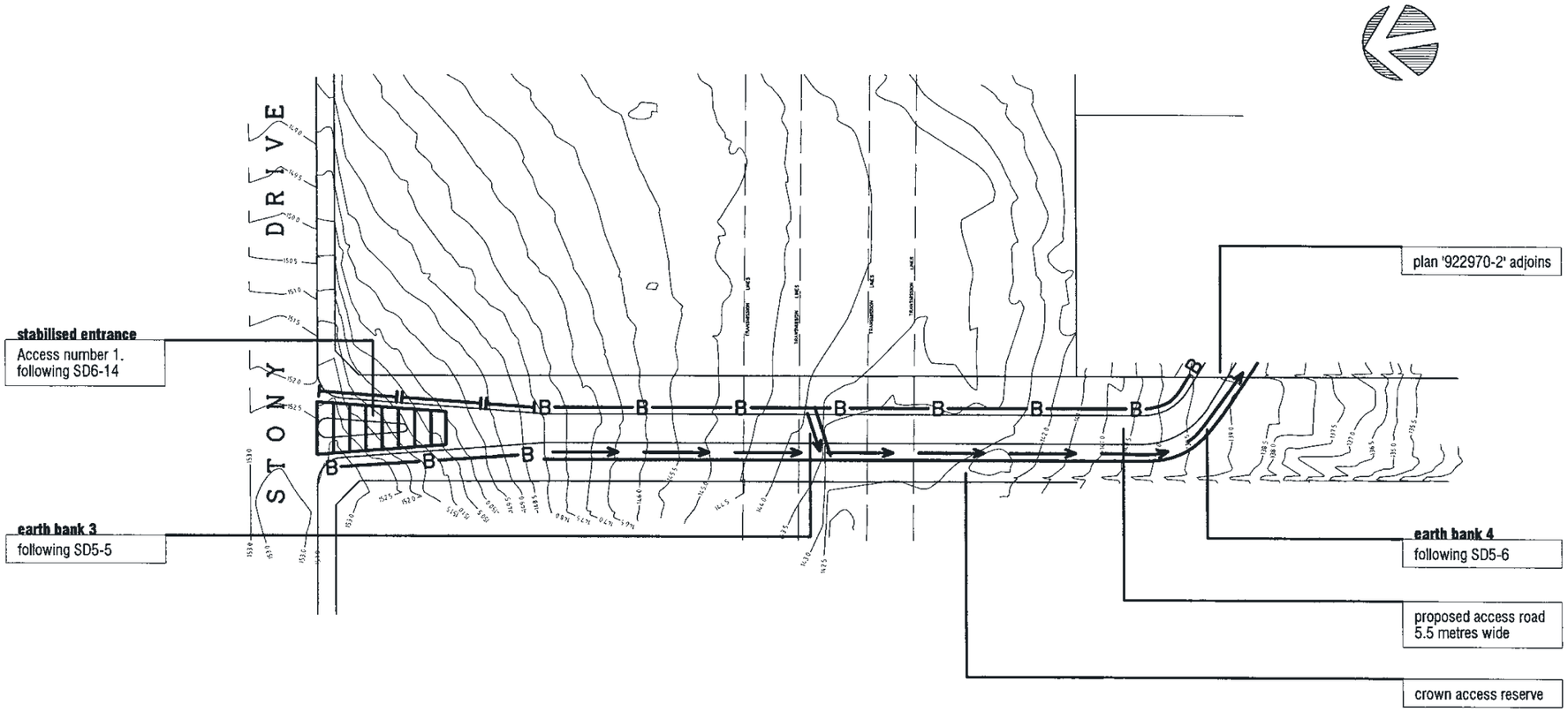
    (i) modified inlets to ensure that polluted waters enter the sediment basins directly and not the WQCP sediment fore-bay;

    (ii) temporary spillway outlets to the open water zone; and

    (iii) extra depth to the structures to achieve capacities in:
    - Sediment Basin 5 greater than the combined design capacities of Sediment Basins 1 and 3
    - Sediment Basin 6 greater than the combined design capacities of Sediment Basins 2 and 4.

32. Upon completion of Sediment Basin 5 and stabilisation of disturbed lands, divert waters into it that had previously entered Sediment Basin 3.

33. After Sediment Basin 5 has been commissioned, remove the creek diversion around the eastern side of the WQCP.



legend soil and water management

B——B	barrier fence
———	sediment fence
——→	earth bank (high flow)
——→	earth bank (low flow)

DETAIL - STAGE 1 AND 2

PLAN SOIL AND WATER MANAGEMENT PLAN		
PROJECT PROPOSED ACCESS ROAD STONY DRIVE SUNSHINE HEIGHTS		
DRAWING SCALE 1:1000 @ A3	DRAWN I. Draw	CHECKED B. Neat
DATE September 2003	DRAWING No 922970-1	

stabilised entrance
Access number 2.
following SD6-14

earth bank 10
following SD5-6
minimum dimensions
base 1.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope <8.3%
velocity 1.45m/s
lining improved perennial
Level spreader at outlet

sediment basin 2
following SD6-4
minimum capacity 103m³

topsoil stockpile
Suggested location. Actual location to be determined by site superintendent.

stormwater pipe 1
to be installed

energy dissipater 5
following SD5-8
flow 0.61m³/s
dimensions 9.5m long
11.6m wide
batter ratio 10:1
construction rock riprap,
0.15m diameter aggregate

earth bank 7
following SD5-6
minimum dimensions
base 1.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope 3.9%
velocity 0.97 m/s
lining improved perennial grass or biomat

earth bank 11
following SD5-6
minimum dimensions
base 1.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope <8.3%
velocity 1.45 m/s
lining improved perennial
Level spreader at outlet

earth bank 6
following SD5-6
minimum dimensions
base 0.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope 5.3%
velocity 0.90 m/s
lining improved perennial grass

earth bank 2
following SD5-6
minimum dimensions
base 1.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope <8.3%
velocity 1.45 m/s
lining improved perennial grass
Level spreader at outlet

energy dissipater 2
following SD5-8
flow 0.2m³/s
dimensions 3m long
4.2m wide
outlet pipe 375mm diameter
batter ratio 10:1
construction rock riprap,
0.15m diameter aggregate

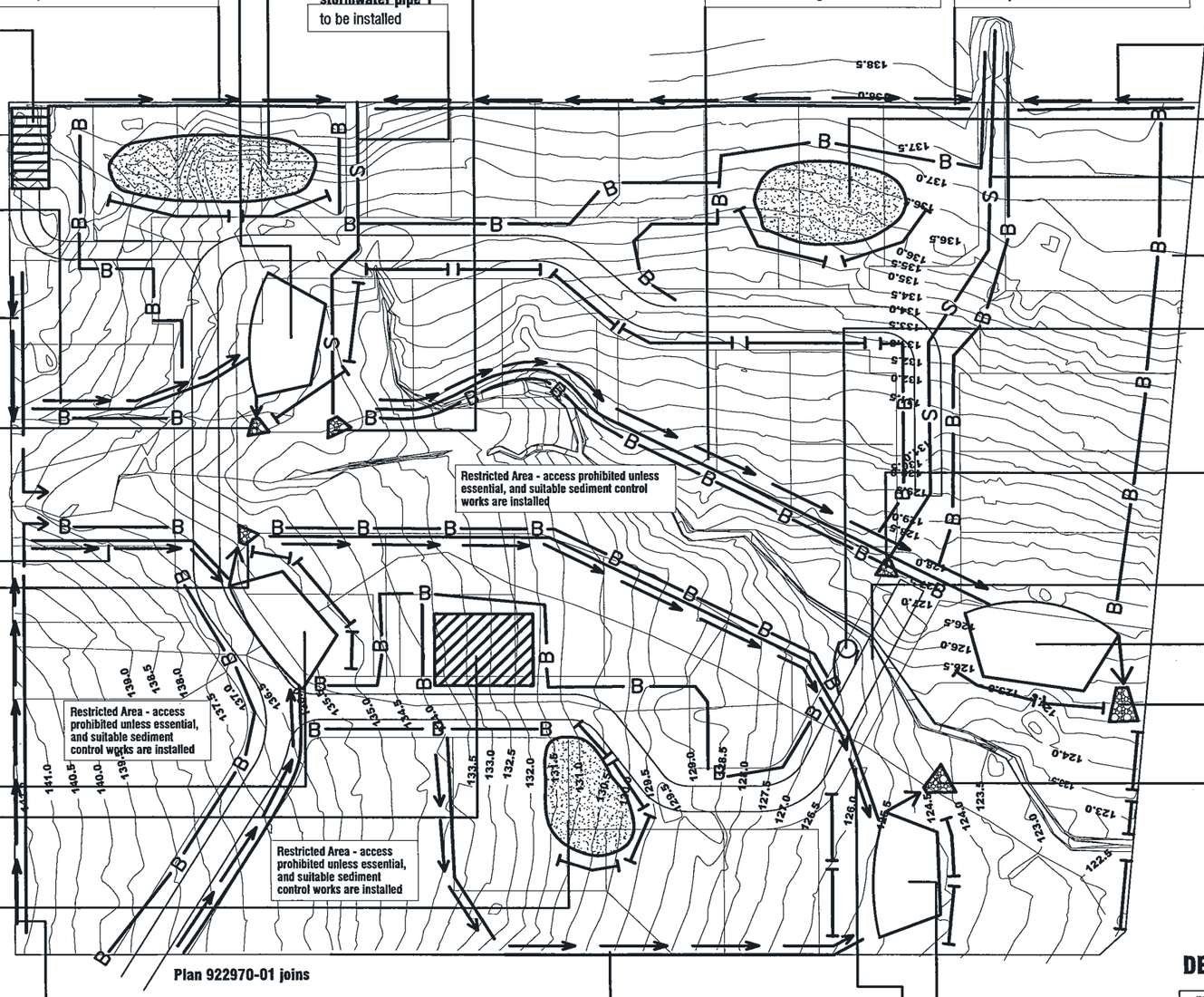
earth bank 5
following SD5-6
minimum dimensions
base 0.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope 7%
velocity 0.98 m/s
lining improved perennial grass

energy dissipater 1
following SD5-8
flow 0.2m³/s
dimensions 3m long
4.2m wide
outlet pipe 375mm diameter
batter ratio 10:1
construction rock riprap,
0.15m diameter aggregate

sediment basin 1
following SD6-4
minimum capacity 87m³

site office
Suggested location. Actual location to be determined by site superintendent.

topsoil stockpile
Suggested location. Actual location to be determined by site superintendent.



earth bank 12
following SD5-6
minimum dimensions
base 1.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope <8.3%
velocity 1.45 m/s
lining improved perennial grass
Level spreader at outlet

topsoil stockpile
Suggested location. Actual location to be determined by site superintendent.

stormwater pipe 2
to be installed

Restricted Area - access prohibited unless essential, and suitable sediment control works are installed

GPT
to be installed imediately upslope of bridge

energy dissipater 6
following SD5-8
flow 0.61m³/s
dimensions 6m long
7.4m wide
batter ratio 10:1
construction rock riprap
0.20m diameter aggregate

Road and drainage works within the restricted area next to the creek, are to be undertaken within the period 16 May to 31 December.

sediment basin 4
following SD6-4
minimum capacity 162m³

energy dissipater 4
following SD5-8
flow 0.61m³/s
dimensions 6m long
7.4m wide
batter ratio 10:1
construction rock riprap,
0.20m diameter aggregate

energy dissipater 3
following SD5-8
flow 0.41m³/s
dimensions 5m long
6.2m wide
batter ratio 10:1
construction rock riprap,
0.20m diameter aggregate

DETAIL - STAGE 1 AND 2

legend soil and water management

B——B	barrier fence
	sediment fence
	earth bank (high flow)
S——S	stormwater line
	level spreader

earth bank 1
following SD5-6
minimum dimensions
base 1.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope <8.3%
velocity 1.45 m/s
lining improved perennial grass
Level spreader at outlet

earth bank 9
following SD5-6
minimum dimensions
base 0.5m (v-shaped channel)
height 0.2m
batters 3:1
channel slope 9.0%
velocity 1.07 m/s
lining improved perennial grass or biomat

earth bank 8
following SD5-6
minimum dimensions
base 0.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope 6.4%
velocity 1.11 m/s
lining improved perennial grass or biomat

sediment basin 3
following SD6-4
minimum capacity 138m³

PLAN
SOIL AND WATER MANAGEMENT PLAN

PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
STONY DRIVE
SUNSHINE HEIGHTS

DRAWING SCALE	DRAWN	CHECKED
1:1000 @ A3	I. Draw	B. Neat

DATE	DRAWING No
September 2003	922970-2

earth bank 10
following SD5-6
minimum dimensions
base 1.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope <8.3%
velocity 1.45m/s
lining improved perennial
Level spreader at outlet

stormwater pipe 1
to be installed

energy dissipater 5
following SD5-8
flow 0.61m³/s
dimensions 9.5m long
11.6m wide
batter ratio 10:1
construction rock riprap, 0.15m diameter aggregate

earth bank 7
following SD5-6
minimum dimensions
base 1.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope 3.9%
velocity 0.97 m/s
lining improved perennial grass or biomat

topsoil stockpile
Suggested location. Actual location to be determined by site superintendent.

stabilised entrance
Access number 2.
following SD6-14

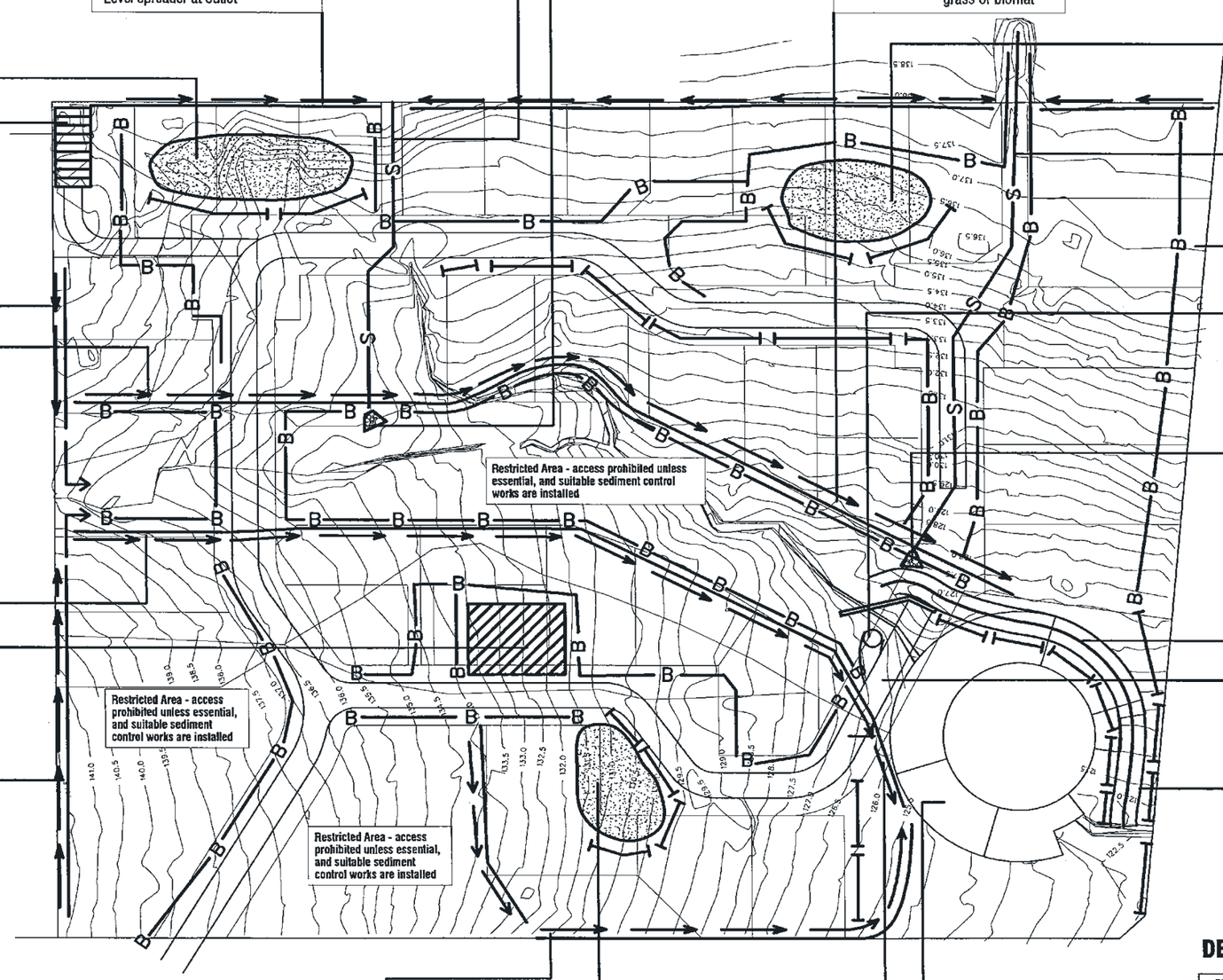
earth bank 2
following SD5-6
minimum dimensions
base 1.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope <8.3%
velocity 1.45 m/s
lining improved perennial grass
Level spreader at outlet

earth bank 6
following SD5-6
minimum dimensions
base 0.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope 5.3%
velocity 0.90 m/s
lining improved perennial grass

earth bank 5
following SD5-6
minimum dimensions
base 0.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope 7%
velocity 0.98 m/s
lining improved perennial grass

site office
Suggested location. Actual location to be determined by site superintendent.

earth bank 1
following SD5-6
minimum dimensions
base 1.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope <8.3%
velocity 1.45 m/s
lining improved perennial grass
Level spreader at outlet



topsoil stockpile
Suggested location. Actual location to be determined by site superintendent.

stormwater pipe 2
to be installed

Restricted Area - access prohibited unless essential, and suitable sediment control works are installed

GPT
to be installed imediately upslope of bridge

energy dissipater 6
following SD5-8
flow 0.61m³/s
dimensions 6m long
7.4m wide
batter ratio 10:1
construction rock riprap
0.20m diameter aggregate

sediment basin 6
following SD6-4
minimum capacity 265m³
Modified inlets will be constructed to ensure that polluted waters enter the basin directly and not the WQCP sediment forebay. Temporary spillway outlets to the open water zone will be constructed. Extra depth to the structure will be added to acheive nominated capacities.

Road and drainage works within the restricted area next to the creek, are to be undertaken within the period 16 May to 31 December.

temporary creek diversion
refer drawing 922970-04

legend soil and water management

B——B	barrier fence
	sediment fence
	earth bank (high flow)
S——S	stormwater line
	level spreader

earth bank 9
following SD5-6
minimum dimensions
base 0.5m (v-shaped channel)
height 0.2m
batters 3:1
channel slope 9.0%
velocity 1.07 m/s
lining improved perennial grass or biomat

topsoil stockpile
Suggested location. Actual location to be determined by site superintendent.

earth bank 8
following SD5-6
minimum dimensions
base 0.5m (v-shaped channel)
height 0.5m
batters 3:1
channel slope 6.4%
velocity 1.11 m/s
lining improved perennial grass or biomat

sediment basin 5
following SD6-4
minimum capacity 225m³
Modified inlets will be constructed to ensure that polluted waters enter the basin directly and not the WQCP sediment forebay. Temporary spillway outlets to the open water zone will be constructed. Extra depth to the structure will be added to acheive nominated capacities.

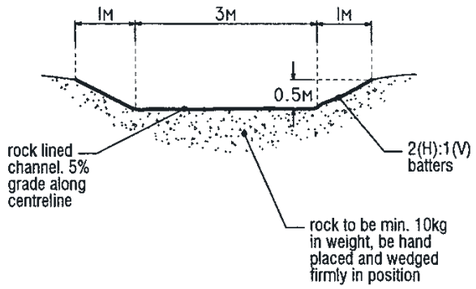
DETAIL - STAGE 3 AND 4

PLAN
SOIL AND WATER MANAGEMENT PLAN

PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
STONY DRIVE
SUNSHINE HEIGHTS

DRAWING SCALE	DRAWN	CHECKED
1:1000 @ A3	I. Draw	B. Neat

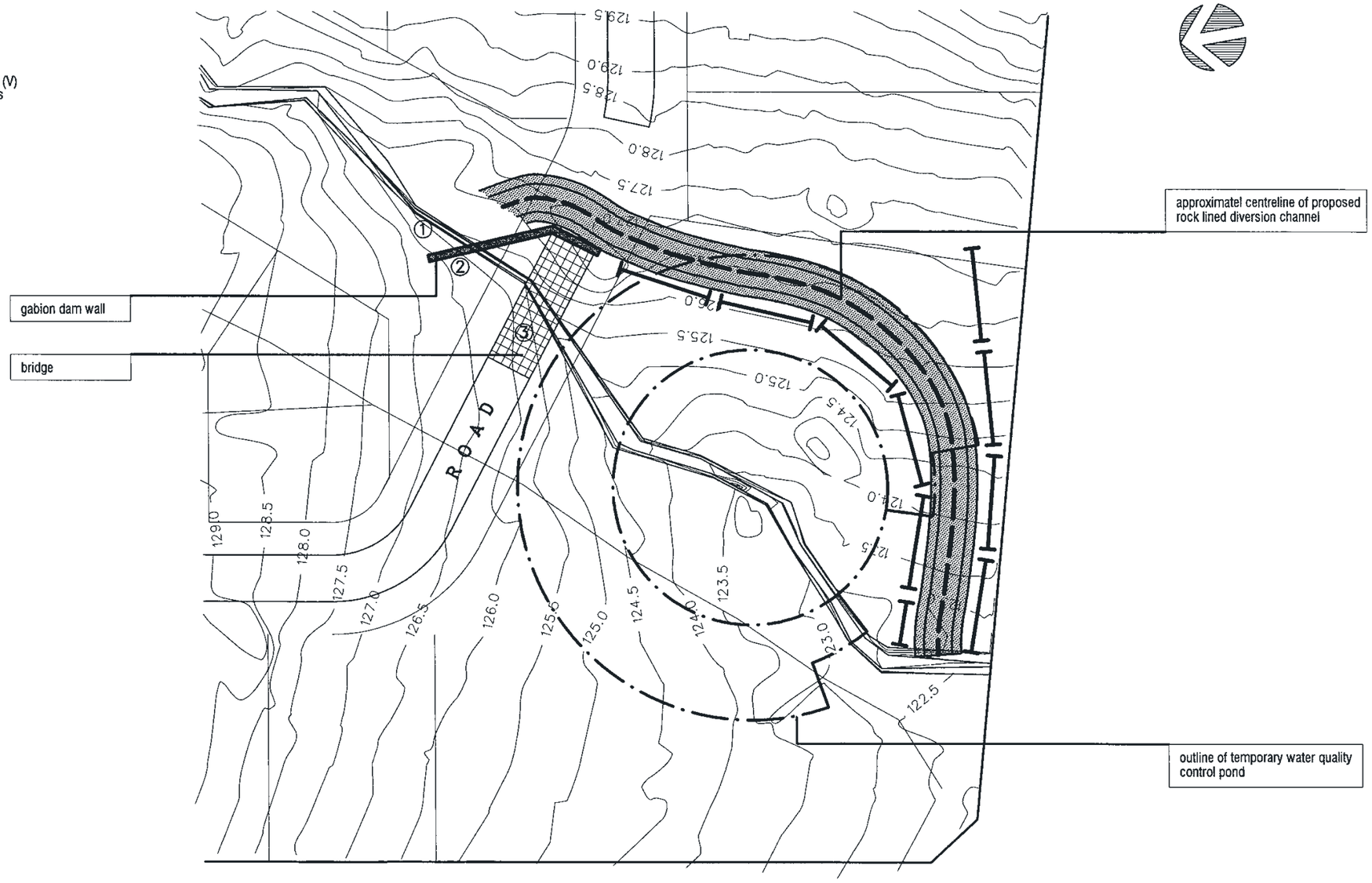
DATE	DRAWING No
September 2003	922970-3



typical section

creek diversion

scale 1:100



legend

	soil and water management
———	sediment fence

levels

MARK	DESCRIPTION	R.L.
1	diversion channel invert - inlet	126.5
2	crest of diversion bank	127.0
3	deck of proposed bridge	126.5

DETAIL - STAGE 3

PLAN
TEMPORARY CREEK DIVERSION

PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
STONY DRIVE
SUNSHINE HEIGHTS

DRAWING SCALE	DRAWN	CHECKED
1:500 @ A3	I. Draw	B. Neat

DATE	DRAWING No
September 2003	922970-4

34. Construct Phase 2 of the WQCP (Sediment Basin 6) and stabilise any disturbed lands.

35. Upon completion of Sediment Basin 6 and stabilisation of all remaining disturbed lands, divert waters into it that had previously entered Sediment Basin 4.

Stage 4 Conditions (refer to Drawings 922970-3 and 922970-4).

36. Conditions 26 and 27 for Stage 2, above, apply to the whole of Stage 4.

37. Complete the roadworks east of the southern bridge, ensuring they do not hinder the flow of waters to Sediment Basin 6. This will probably require the construction of a culvert.

38. Connect Earth Banks 5 and 8, and 6 and 7 so that waters drain to Sediment Basins 5 or 6. Also, adjust the location of Earth Bank 9 to ensure that waters enter Sediment Basin 5.

39. Remove all sediment from Sediment Basins 1 and 2 and decommission them.

Stage 5 Conditions

40. Building works can be undertaken in this stage. It concludes after the lesser of:
    - a period of four years from the completion of Stage 4
    - 90 percent of the building works have been completed with associated disturbed lands stabilised.

During this Stage, the developer's responsibilities are limited to maintenance of the CDS device and Sediment Basins 5 and 6.

Stage 6 Conditions (refer to Drawing 922970-3).

41. Remove sediment from Sediment Basins 5 and 6 and decommission them. Decommission other temporary soil conservation works.

42. Where necessary, complete connections to the stormwater system (some aspects of this have been connected to temporary paths in earlier stages).

43. Complete works on the WQCP as shown on separate engineering drawings. This involves converting Sediment Basins 5 and 6 into wetlands, reconfiguring the inlets and outlets to the wetlands to meet the design criteria, and ensuring all site stormwater enters the GPT device (up to the design flow) and the WQCP sediment forebay.

44. Undertake final site stabilisation.

Erosion Control Conditions

45. Clearly visible barrier fencing shall be installed as shown on the *SWMP* and elsewhere at the discretion of the site superintendent to ensure traffic control and

prohibit unnecessary site disturbance. Vehicular access to the site shall be limited to only those essential for construction work and they shall enter the site only through the stabilised access points.

46. Soil materials will be replaced in the same order they are removed from the ground. It is particularly important that all subsoils are buried and topsoils remain on the surface at the completion of works.

47. Where practicable, schedule the construction program so that the time from starting land disturbance activities to stabilisation is a duration of less than six months. Here stabilisation means achieving a *C*-factor of less than 0.1 and set in motion a program that should ensure it will drop permanently, by vegetation, paving, armouring, etc. to less than 0.05 within a further 60 days. Of course, local water restrictions might affect this in drought times.

48. Notwithstanding this, schedule works so that the duration from the conclusion of land shaping to completion of final stabilisation is less than 20 working days.

49. While *C*-factors are likely to rise to 1.0 during the work's program, they should not exceed those given in Table 9.7 in the long term. The requirements of Table 9.7 can be achieved as follows:

(i) In areas of sheet flow, with a temporary vegetative cover and a suggested listing of suitable plant species is shown in Table 9.8 (note, these plants only protect the ground surface for up to six months). Where the plants suggested in Table 9.8 are used, lime amendments at rates of 4.0 kg/tonne of topsoil and 7.5 kg/tonne of subsoil will help surface stabilisation. Alternately, the area can be sprayed with a soil binder for protection up to 3 months duration using Terra-Control® or equivalent

(ii) In areas of concentrated water flow, with 350 gsm jute matting or equivalent, installed following SD 5-7 – see also Table 5.1 in Landcom (2004).

50. Lands recently established with grass species will be watered regularly until an effective cover has properly established and plants are growing vigorously. Further application of seed might be necessary later in areas of inadequate vegetation establishment.

51. Where practical, foot and vehicular traffic will be kept away from all recently stabilised areas.

52. Earth batters shall be constructed with as low a gradient as practical but not steeper than:

- 2(H):1(V) where slope length is less than 7 metres
- 2.5(H):1(V) where slope length is between 7 and 10 metres
- 3(H):1(V) where slope length is between 10 and 12 metres

Table 9.7 Maximum acceptable C-factors at Nominated Times During Works

Lands	Maximum C-factor	Remarks
Waterways and other areas subjected to concentrated flows, post construction	0.05	Applies after ten working days from completion of formation and before they are allowed to carry any concentrated flows. Flows will be limited to those shown in Table 5.1 of Landcom (2004). Foot and vehicular traffic will be prohibited in these areas (70% ground cover)
Stockpiles, post-construction	0.1	Applies after ten working days from completion of formation. Maximum C-factor of 0.10 equals 60% ground cover
All lands, including waterways and stockpiles during construction	0.15	Applies after 20 working days of inactivity, even though works might continue later. Maximum C-factor of 0.15 equals 50% ground cover

Table 9.8 Plant species for temporary cover

Sowing season	Seed mix
Autumn / Winter	oats @ 40 kg/ha
	Japanese millet @ 10 kg/ha
Spring / Summer	Japanese millet @ 20 kg/ha
	oats @ 20 kg/ha

- 4(H):1(V) where slope length is between 12 and 18 metres
- 5(H):1(V) where slope length is between 18 and 27 metres
- 6(H):1(V) where slope length is greater than 27 metres.

Slope length can be shortened by using low flow earth banks (SD 5.5) as catch drains.

53. Stockpiles (SD 4-1) will be located as shown on Drawings 922970-2 and 922970-3.

54. All earthworks, including waterways/drains/spillways and their outlets, will be constructed to be stable in at least the 10-year ARI time of concentration storm event.

55. During windy weather, large, unprotected areas will be kept moist (not wet) by sprinkling with water to keep dust under control. In the event water is not available in sufficient quantities, soil binders and/or dust retardants will be used or the surface will be left in a cloddy state that resists removal by wind.

Pollution Control Conditions

56. Notwithstanding Condition 54, stockpiles will not be located within 5 metres of hazard areas, including likely areas of high velocity flows such as waterways, paved areas and driveways.

57. Sediment fences (SD 6-8) will:

    (i) be installed where shown on Drawings 922970-1, 922970-2 and 922970-3 and elsewhere at the discretion of the site superintendent to contain the coarser sediment fraction (including aggregated fines) as near to as possible to their source;

    (ii) have catchment areas not exceeding 1,030 square metres,

    (iii) have returns of 1 metre upslope at intervals along the fences where the catchment areas exceed 1,030 square metres, to limit the discharge reaching each section to 50 litres per second in a maximum 10-year tc discharge.

58. The sediment retention basins (SD 6-4) will:

    (i) be constructed where shown on Drawings 922970-2 and 922970-3. They have been designed to a formula based on a design storm event (Attachment);

    (ii) be flocculated (Appendix E, Landcom (2004)) before discharge occurs (unless the design storm event is exceeded); and

    (iii) have one or more pegs placed on the floor to indicate clearly the level at which design capacity occurs and when sediment will be removed.

    Note: Capacities include an additional calculated amount to cater for sediment build up.

59. Stored contents of the basins will be treated with gypsum (Appendix E, Landcom (2004)) or other flocculating agents where they contain more than 50 mg/L of suspended solids. Treatment will be as follows:
    - treat the waters and allow at least 24 hours to settle within four days from the conclusion of a rainfall event
    - drain the basins so that full storage capacity is regained without discharging sediment from the site within five days from the conclusion of a rainfall event.
60. Sediment removed from any trapping device will be disposed in locations where further erosion and consequent pollution to downslope lands and waterways will not occur.
61. Water will be prevented from directly entering the permanent drainage system unless it is relatively sediment free (i.e. the catchment area has been permanently landscaped and/or any likely sediment has been treated in an approved device). Nevertheless, stormwater inlets will be protected (SD 6-11 and SD 6-12).
62. Temporary soil and water management structures will be removed only after the lands they are protecting are stabilised.

Waste Management Condition

63. Acceptable bins will be provided for any concrete and mortar slurries, paints, acid washings, lightweight waste materials and litter. Clearance services will be provided at least weekly.

Site Inspection and Maintenance

(a) During Stages 1, 2, 3, 4 and 6

64. A self-auditing program will be established based on a Check Sheet. A site inspection using the Check Sheet will be made by the site manager:
    - at least weekly
    - immediately before site closure
    - immediately following rainfall events greater than 5-mm in any one 24-hour period.

    The self audit will include:
    - recording the condition of every BMP employed
    - recording maintenance requirements (if any) for each BMP
    - recording the volumes of sediment removed from sediment retention systems, where applicable
    - recording the site where sediment is disposed
    - forwarding a signed duplicate of the completed Check Sheet to the project manager/developer for their information.

65. In addition, a suitably qualified person will be required to oversee the installation and maintenance of all soil and water management works on the site. The person will be required to spend a minimum of:

    (i) two hours onsite each fortnight during Stages 1, 2, 3, 4 and 6 and to provide a short monthly written report; and

    (ii) one-hour onsite each two months during Stage 5 to provide a short written report each four months.

    The responsible person will ensure that:

    - the Plan is being implemented correctly
    - repairs are undertaken as required
    - essential modifications are made to the Plan if and when necessary.

    The report shall carry a certificate that certifies that works have been carried out following the approved plans.

66. Waste bins will be emptied as necessary. Disposal of waste will be in a manner approved by the Site Superintendent.

67. Proper drainage of the site will be maintained. To this end drains (including inlet and outlet works) will be checked to ensure that they are operating as intended, especially that:

    (i) no low points exist which can overtop in a large storm event;

    (ii) areas of erosion are repaired (e.g. lined with a suitable material) and/or velocity of flow is reduced appropriately through construction of small check dams or installing additional diversions upslope; and

    (iii) blockages are cleared (these might occur because of sediment pollution, sand/soil/spoil being deposited in or too close to them, breached by vehicle wheels, etc.).

68. Sand/soil/spoil materials placed closer than 2 metres from hazard areas will be removed. Such hazard areas include any areas of high velocity water flows (e.g. waterways and gutters), paved areas and driveways.

69. Recently stabilised lands will be checked to ensure that the erosion hazard has been effectively reduced. Any repairs will be initiated as appropriate.

70. Excessive vegetative growth will be controlled through mowing or slashing.

71. All sediment detention systems will be kept in good, working condition. In particular, attention will be given to:

    (i) recent works to ensure that they have not resulted in diversion of sediment laden water away from them;

    (ii) degradable products to ensure they are replaced as required; and

(iii) sediment removal, to ensure the design capacity or less remains in the settling zone.

72. Any pollutants removed from sediment basins or littler traps will be disposed in areas where further pollution to downslope lands and waterways should not occur.

73. Additional erosion and/or sediment control works will be constructed as might become necessary to ensure the desired protection is given to downslope lands and waterways, i.e. make ongoing changes to the *SWMP* where it proves inadequate in practice or is subjected to changes in conditions at the work site or elsewhere in the catchment.

74. Erosion and sediment control measures will be maintained in a functioning condition until all earthwork activities are completed and the site stabilised.

(b) During Stage 1, 2, 3, 4, 5 and 6

75. Waters in sediment retention basins that occupy more than one quarter of the design capacity will be:

(i) treated with a flocculating agent (Appendix E of Landcom (2004)); and

(ii) discharged within five days from the conclusion of any storm event large enough to fill the basin to that level.

76. Litter, debris and coarse sediment will be removed from the gross pollutant traps and trash racks as required.

Attachment: Sediment Basin Calculations (construction phase)

This site in question has been divided into four subcatchments to better manage the control of erosion and sediment.

Sediment Basin 1 (northwest basin)

Catchment Characteristics

Total catchment area	=	0.72 ha
Disturbed catchment area	=	0.20 ha
RUSLE R-factor	=	2,500
Slope length	=	80 m
Slope gradient	=	10 %

Basin Volume

Basin volume = settling zone volume + sediment storage volume

Settling Zone Volume

The settling zone volume for Type D soils is calculated to contain all runoff expected from the 75th percentile, 5-day rainfall depth.

$$\text{Volume} = 10 \times C_V \times A \times R_{75\text{th ile, 5 day}}$$

Where:

10	is a unit conversion factor
C_V	is the volumetric runoff coefficient, defined as that portion of rainfall that runs off as stormwater over the 5-day period (0.5)
R	is the 5-day total rainfall depth (mm) that is not exceeded in 75 percent of rainfall events (18.6)
A	is area of catchment in hectares (ha) (0.72)

$$\text{Volume} = 10 \times C_V \times A \times R_{75\text{th ile, 5 day}}$$
$$= 10 \times 0.5 \times 0.72 \times 18.6$$
$$= 67\ m^3$$

Sediment Storage Zone Volume

The sediment storage volume is normally taken as 50 percent of the capacity of the settling zone or as two months soil loss as calculated by the RUSLE, whichever is the larger. The settling zone volume is 67 m^3 giving a potential sediment storage volume of 34 m^3. However, two months (0.17 years) soil loss is:

$$\text{Sediment storage zone}_{Type\ D} = 0.17\ A\ (R \times K \times LS \times P \times C)/1.3\ m^3$$

Where:

0.17	is a factor to convert the annual calculated soil loss to the 2-month soil loss
A	is the disturbed area
R	is the RUSLE R-factor (2,500)
K	is the RUSLE K-factor (0.036)
LS	is the RUSLE LS-factor (2.81)
P	is the RUSLE P-factor (1.3)
C	is the RUSLE *C*-factor (1.0)
1.3	is a factor to convert tonnes to cubic metres, assuming a typical density of saturated sediment of 1.3

$$\text{Sediment storage zone}_{Type\ D} = 0.17 \times 0.2 \times 2500 \times 0.036 \times 2.81 \times 1.3 \times 1.0/1.3$$
$$= 8.5\ m^3$$

Total Basin Volume

$$\text{Total basin volume} = \text{settling zone volume} + \text{sediment storage volume}$$
$$= 67 + 34$$
$$= 101\ m^3$$

Sediment Basin 2 (northeast basin)

Catchment Characteristics

Total catchment area	=	0.85 ha
Disturbed catchment area	=	0.30 ha
RUSLE R-factor	=	2,500
Slope length	=	80 m
Slope gradient	=	10 %

Basin Volume

Basin volume = Settling zone volume + sediment storage volume

Settling Zone Volume

The settling zone volume for *Type D* soils is calculated to contain all runoff expected from the 75th percentile, 5-day rainfall depth.

$$\text{Volume} = 10 \times C_V \times A \times R_{75\text{th ile, 5 day}}$$

Where:

10	is a unit conversion factor
C_V	is the volumetric runoff coefficient, defined as that portion of rainfall that runs off as stormwater over the 5-day period (0.5)
R	is the 5-day total rainfall depth (mm) that is not exceeded in 75 percent of rainfall events (18.6)
A	is area of catchment in hectares (ha) (0.85)

$$\text{Volume} = 10 \times C_V \times A \times R_{75\text{th ile, 5 day}}$$
$$= 10 \times 0.5 \times 0.85 \times 18.6$$
$$= 79\ m^3$$

Sediment Storage Zone Volume

The sediment storage volume is normally taken as 50 percent of the capacity of the settling zone or as two months soil loss as calculated by the RUSLE, whichever is the larger. The settling zone volume is 79 m^3 giving a potential sediment storage volume of 40 m^3. However, two months (0.17 years) soil loss is:

Sediment storage zoneType D = 0.17 A (R x K x LS x P x C)/1.3 m^3

Where:

0.17	is a factor to convert the annual calculated soil loss to the 2-month soil loss
A	is the disturbed area
R	s the RUSLE R-factor (2,500)
K	is the RUSLE K-factor (0.036)
LS	is the RUSLE LS-factor (2.81)
P	is the RUSLE P-factor (1.3)
C	is the RUSLE *C*-factor (1.0)
1.3	is a factor to convert tonnes to cubic metres, assuming a typical density of saturated sediment of 1.3

Sediment storage zone*Type D* = 0.17 x 0.3 x 2500 x 0.036 x 2.81 x 1.3 x 1.0/1.3

= 12.7 m^3

Total Basin Volume

Total basin volume = settling zone volume + sediment storage volume

= 79 + 40

= 119 m^3

Sediment Basin 3 (southwest basin)

Catchment Characteristics

Total catchment area	=	1.14 ha
Disturbed catchment area	=	0.60 ha
RUSLE R-factor	=	2,500
Slope length	=	80 m
Slope gradient	=	10 %

Basin Volume

Basin volume = settling zone volume + sediment storage volume

Settling Zone Volume

The settling zone volume for Type D soils is calculated to contain all runoff expected from the 75th percentile, 5-day rainfall depth.

$$\text{Volume} = 10 \times C_V \times A \times R_{75\text{th ile, 5 day}}$$

Where:

10	is a unit conversion factor
C_V	is the volumetric runoff coefficient, defined as that portion of rainfall that runs off as stormwater over the 5-day period (0.5)
R	is the 5-day total rainfall depth (mm) that is not exceeded in 75 percent of rainfall events (18.6)
A	is area of catchment in hectares (ha) (1.14)

$$\begin{aligned} \text{Volume} &= 10 \times C_V \times A \times R_{75\text{th ile, 5 day}} \\ &= 10 \times 0.5 \times 1.14 \times 18.6 \\ &= 106\ m^3 \end{aligned}$$

Sediment Storage Zone Volume

The sediment storage volume is normally taken as 50 percent of the capacity of the settling zone or as two months soil loss as calculated by the RUSLE, whichever is the larger. The settling zone volume is 106 m^3 giving a potential sediment storage volume of 53 m^3. However, two months (0.17 years) soil loss is:

$$\text{Sediment storage zone}_{Type\ D} = 0.17\ A\ (R \times K \times LS \times P \times C)/1.3\ m^3$$

Where:

0.17	is a factor to convert the annual calculated soil loss to the 2-month soil loss
A	is the disturbed area
R	s the RUSLE R-factor (2,500)
K	is the RUSLE K-factor (0.036)
LS	is the RUSLE LS-factor (2.81)
P	is the RUSLE P-factor (1.3)
C	is the RUSLE *C*-factor (1.0)
1.3	is a factor to convert tonnes to cubic metres, assuming a typical density of saturated sediment of 1.3

$$\text{Sediment storage zone}_{Type\ D} = 0.17 \times 0.6 \times 2{,}500 \times 0.036 \times 2.81 \times 1.3 \times 1.0/1.3$$
$$= 25.3\ m^3$$

Total Basin Volume

$$\text{Total basin volume} = \text{settling zone volume} + \text{sediment storage volume}$$
$$= 106 + 53$$
$$= 159\ m^3$$

Sediment Basin 4 (southeast basin)

Catchment Characteristics

Total catchment area	=	1.29 ha
Disturbed catchment area	=	1.0 ha
RUSLE R-factor	=	2,500
Slope length	=	80 m
Slope gradient	=	10 %

Basin Volume

Basin volume = settling zone volume + sediment storage volume

Settling Zone Volume

The settling zone volume for *Type D* soils is calculated to contain all runoff expected from the 75th percentile, 5-day rainfall depth.

$$\text{Volume} = 10 \times C_V \times A \times R_{75\text{th ile, 5 day}}$$

Where:

10	is a unit conversion factor
C_V	is the volumetric runoff coefficient, defined as that portion of rainfall that runs off as stormwater over the 5-day period (0.5)
R	is the 5-day total rainfall depth (mm) that is not exceeded in 75 percent of rainfall events (18.6)
A	is area of catchment in hectares (ha) (1.29)

$$\text{Volume} = 10 \times 0.5 \times 1.29 \times 18.6$$
$$= 120 \text{ m}^3$$

Sediment Storage Zone Volume

The sediment storage volume is normally taken as 50 percent of the capacity of the settling zone or as two months soil loss as calculated by the RUSLE, whichever is the larger. The settling zone volume is 120 m^3 giving a potential sediment storage volume of 60 m^3. However, two months (0.17 years) soil loss is:

Sediment storage zoneType D = 0.17 A (R x K x LS x P x C)/1.3 m^3

Where

0.17	Is a factor to convert the annual calculated soil loss to the 2-month soil loss
A	is the disturbed area
R	is the RUSLE R-factor (2,500)
K	is the RUSLE K-factor (0.036)
LS	is the RUSLE LS-factor (2.81)
P	is the RUSLE P-factor (1.3)
C	is the RUSLE *C*-factor (1.0)
1.3	is a factor to convert tonnes to cubic metres, assuming a typical density of saturated sediment of 1.3

Sediment storage zone*Type D* = 0.17 x 1.0 x 2500 x 0.036 x 2.81 x 1.3 x 1.0/1.3

= 42.2 m^3

Total Basin Volume

Total basin volume = settling zone volume + sediment storage volume

= 120 + 60

= 180 m^3

Chapter 10

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APPENDIX A

Appendix A

A1 Revised Universal Soil Loss Equation

While assessment of runoff is commonplace in the urban planning process, estimating possible soil loss is not. Nonetheless, estimates of soil loss have four important applications to soil and water management. These are to:

- assess the erosion risk at a site
- identify suitable measures to overcome the erosion risk
- estimate the required capacity of sediment retarding basins
- compare the effectiveness of various erosion control measures.

Therefore, by estimating likely soil loss levels, land planners can gear erosion and sediment control measures to each part of any development site. Consequently, they can mitigate possible soil erosion and consequent sediment pollution to downslope lands and waterways.

The Revised Universal Soil Loss Equation (RUSLE) is designed to predict the long term, average, annual soil loss from sheet and rill flow at nominated sites under specified management conditions. The predicted losses are empirically derived and it is anticipated that the monitoring and comparison of actual soil loss onsite measured against that calculated will lead to a substantiation of the equation. Further validations of this methodology on construction sites are still being investigated. The original application is described by Wischmeier and Smith (1978) and revised by Renard, Foster, Weesies and Porter (1991) and Renard, Foster, Weesies, McCool and Yoder (1997). It has been adapted to urban sites by Goldman *et al.*, (1986) and modified for Australian conditions in a computer program called SOILOSS (Rosewell, 1993b). The equation is represented by:

$$A = R\ K\ LS\ P\ C \quad \text{. . . . . Equation (1)}$$

where,
- A = computed soil loss (tonnes/ha/yr)[1]
- R = rainfall erosivity factor
- K = soil erodibility factor
- LS = slope length/gradient factor
- P = erosion control practice factor
- C = ground cover and management factor.

Because the RUSLE takes into consideration all major components likely to affect sheet erosion, it is the most widely used (and abused) soil loss equation available. While it does have great practical value, its limitations should be recognised and understood.

1. In the urban context, it can be assumed that soil loss derived from the RUSLE is equal to the sediment flux into a sediment retardation basin located on, or immediately next to a site, and the volume of sediment entering within a year is:

$$\text{Volume } (m^3) = \frac{\text{mass of dry delivered sediment}}{\text{density of saturated sediment}}$$

The main limitations of the RUSLE are that:

(i) It only predicts sediment entrained in the erosion process and does not predict sediment yields into particular sediment basins;[2]

(ii) It predicts average annual soil loss and not that for a particular storm event;

(iii) It is effective for erosion through sheet and rill flow only on short slopes (<300m) and not for concentrated flow or long slopes; and

(iv) It does not adequately take into account soil dispersibility in assessment of the K-factor.

Despite these matters, the RUSLE has its benefits and should be applied at all urban development sites, even at a cursory level.

A2 Rainfall Erosivity Factor – R

The rainfall erosivity factor, R, is a measure of the ability of rainfall to cause erosion. It is the product of two components: total energy (E) and maximum 30-minute intensity for each storm (I30). So, the total of EI for a year is equal to the R-factor.

Rosewell and Turner (1992) have identified a strong correlation between the R-factor and the 2-year ARI, 6-hour storm event. Data in Appendix B has been based on this phenomenon. It includes a small-scale map of the R-factor for all New South Wales and more detailed information for some coastal locations where contours are very tight. Where Appendix B still does not give sufficient detail, the R-factor can be obtained from Equation 2.

$$R = 164.74(1.1177)^{S} S^{0.6444} \quad \text{. . . . . Equation (2)}$$

where S is the 2-year ARI, 6-hour ARI rainfall event (mm) (Rosewell and Turner, 1992).

Isoerodent maps showing lines of equal erosivity were published for Queensland (Rosenthal and White, 1980), Western Australia (McFarlane *et al.* 1986), New South Wales (Rosewell and Turner 1992), South Australia (Yu and Rosewell, 1966b), and Victoria (Sheridan and Rosewell, 2003). In addition, a relationship between the R-factor and 2-year, 6-hour rainfall intensity has been developed for many sites in Australia (Rosewell and Turner 1992, Rosewell 1993a). Such a relationship has been used to estimate rainfall erosivity for all states and territories based on rainfall intensity data published in Pilgrim (1998), Rosewell (1993b and 1997), and Sheridan and Rosewell (2003). High resolution, Australia-wide maps of R-factor are in the Australian Natural Resources Atlas (figure A1).

2. In most situations, not all the sediment entrained on eroding lands is transported away from the site. However, at most construction sites where sediment trapping devices are very close to areas of erosion and the fine particles are flocculated, it can be assumed that most sediment entrained can be trapped.

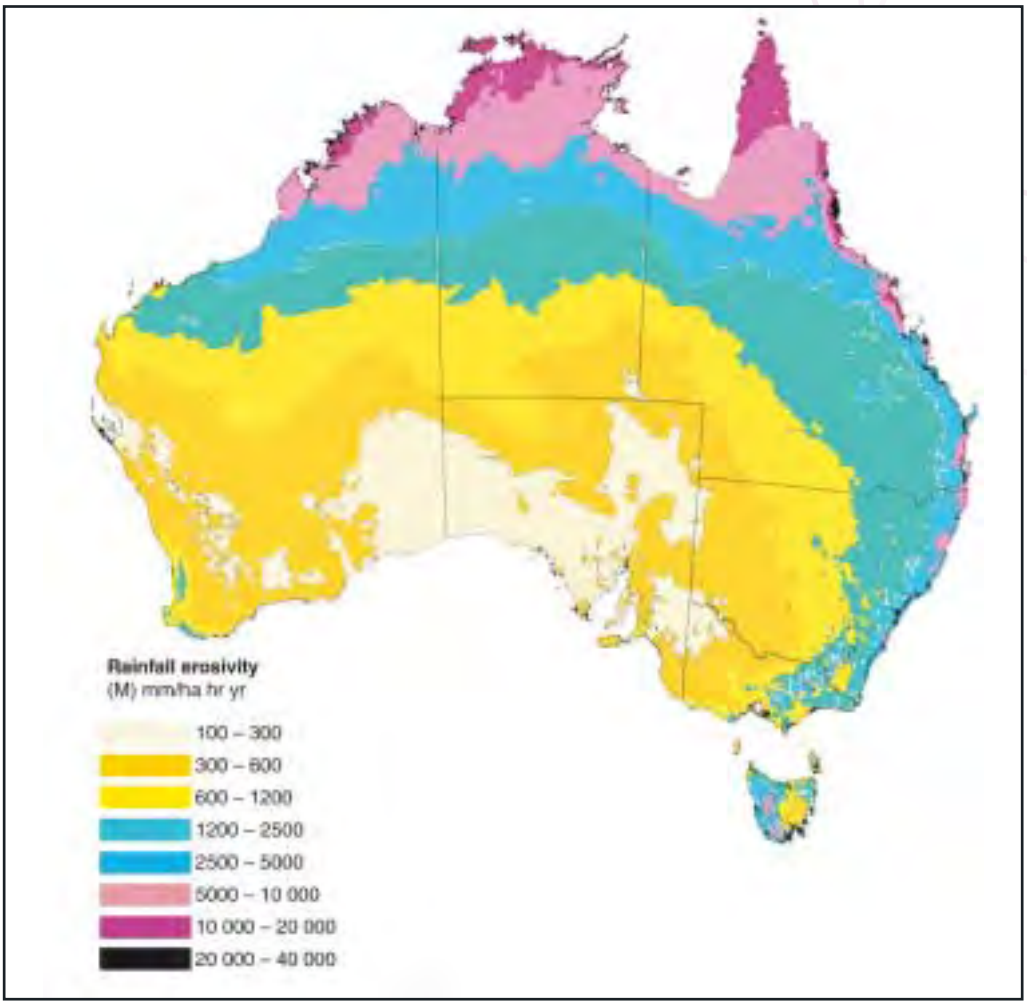


Figure A1 R-factors for Australia (Australian Natural Resources Atlas, 2001)

The quality of the estimated R-factor depends on the quality of the limited pluviograph data. To overcome the problem with limited pluviograph data and to estimate the seasonal distribution of rainfall erosivity, a model using daily rainfall data has been tested for both temperate and tropical regions of Australia (Yu and Rosewell 1996a and 1996b, Yu 1998). Also, regional relationships of model parameters were developed to allow prediction of the R-factor and its monthly distribution from daily rainfall anywhere in Australia (Yu, 1998).

Based on average rainfall data, the high R-factor for Cairns (16,950) is particularly relevant because 77 percent of it occurs in the four-month monsoon season between December and March. Conversely, Adelaide has a very low R-factor (330) with a much more non seasonal rainfall that is very much lower in total.

Where there is any significant seasonality to the R-factor, monthly or fortnightly data should be used to identify those times of the year when lands with very high erosion hazards should:

- either not be developed, or
- have special erosion control measures put in place to compensate.

Fortnightly EI data are available for some locations in New South Wales (Rosewell and Turner, 1992) (Table 7.1) and monthly data in Queensland (Rosenthal and White, 1980). Monthly estimates are available for some locations in South Australia (Yu and Rosewell, 1996b) and Western Australia (McFarlane *et al.*, 1986). A method for estimating half monthly values of erosivity from monthly data is provided by Renard *et al.* (1997).

Noting that data on the R-factor in the RUSLE are derived from average annual rainfall information is important. Consequently, it does not account for seasonality or hydrology, especially antecedent conditions affecting peak flow and total runoff. Other methods are available to help where more detailed data are required (Section A7).

In some areas in eastern Australia, rainfall erosivity does not vary much throughout the year. Such areas usually have quite low R-factors, so erosion hazards are relatively low. However, local rainfall statistics in other areas show marked seasonal trends and some of these have quite high R-factors. In these areas, development and construction works programs should take advantage of the statistical information and encourage works on lands with high erosion hazards to be undertaken in "drier" months. This risk-based approach recognises that unseasonable rainfall events might occur at unexpected times, both from one year to another and seasonally.

Rosewell and Turner (1992) provide data for 29 sites in NSW on the "annual exceedence probability" (AEP) for rainfall erosivity. The annual exceedence probability is the probability of exceedence of a given R-factor in any one year. Figure A2 illustrates the effect of rainfall variation at a site at Richmond, NSW. It shows computed average annual soil loss for different slopes using:

- the R-factor for the site (1,772); and
- the 50 percent, 20 percent and 5 percent AEP for rainfall erosivities (1,397, 2,247 and 3,536, respectively) instead of the R-factor.

The Richmond site has a K-factor of 0.038, a P-factor of 1.3, a C–factor of 1.0 and slope length is 80 metres. Most importantly, the data shows that the calculated average annual soil loss based on:

- the 5 percent AEP rainfall erosivity is higher than data based on the R-factor by 1.99
- the 20 percent AEP is higher by 1.27
- the 50 percent AEP is lower by 0.79.

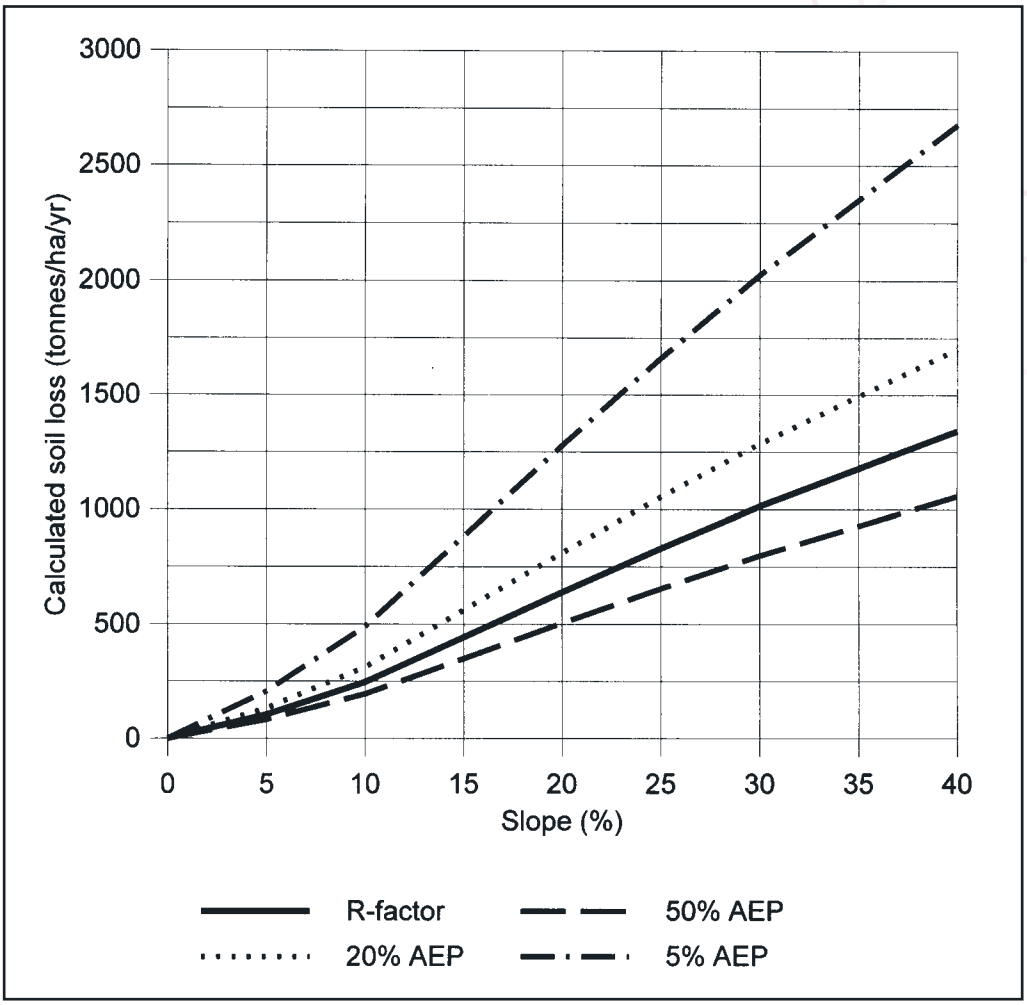


Figure A2 Average annual soil losses calculated for a site near Richmond, NSW, based on the usual R-factor, and the 50 percent, 20 percent and 5 percent AEP

Note that the variations illustrated in Figure A2 are not constant from one location to another. For example, a similar analysis at Port Kembla, NSW, shows the 5 percent AEP higher by 3.28, the 20 percent AEP higher by 1.52 and the 50 percent AEP lower by 0.68.

Also, note that at Richmond, there is a 20 percent probability that a single storm can yield a rainfall erosivity (erosion index) of 1,021 compared with the R-factor (long-term average annual sum of erosion index) of 1,772. Likewise, there is a 10 percent and 5 percent probability that it can yield rainfall erosivities of 1,453 and 2,258 respectively.

A3 Soil Erodibility Factor – K

The soil erodibility factor, K, is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil texture is the principle component affecting K, but soil structure, organic matter and profile permeability also contribute. In the RUSLE, it is a quantitative value experimentally determined.

K should be derived for each particular site and based on laboratory analysis, particularly at sensitive sites. The method for estimating the K-factor is described by Rosewell and Loch (2002). Figure A3 or the SOILOSS program (Rosewell, 1993b) or can help deriving K from raw laboratory data.[3] Generally, the K-factor ranges from 0.005 (very low) to 0.075 (very high).

When using figure A3, note the following:

(a) "Texture grading" is described in the following classes – only particles finer than 2 mm are entered here:

- Coarse sand – 0.2 to 2.0 mm diameter (200 to 2,000 microns)
- Fine sand – 0.1 to 0.2 mm (100 to 200 microns)
- Very fine sand – 0.02 to 0.1 mm diameter (20 to 100 microns)
- Silt – 0.002 to 0.02 mm diameter (2 to 20 microns)
- Clay – < 0.002 mm diameter (<2 microns).

(b) "Organic matter" – to convert percentage organic carbon to percent organic matter, multiply by 1.72.

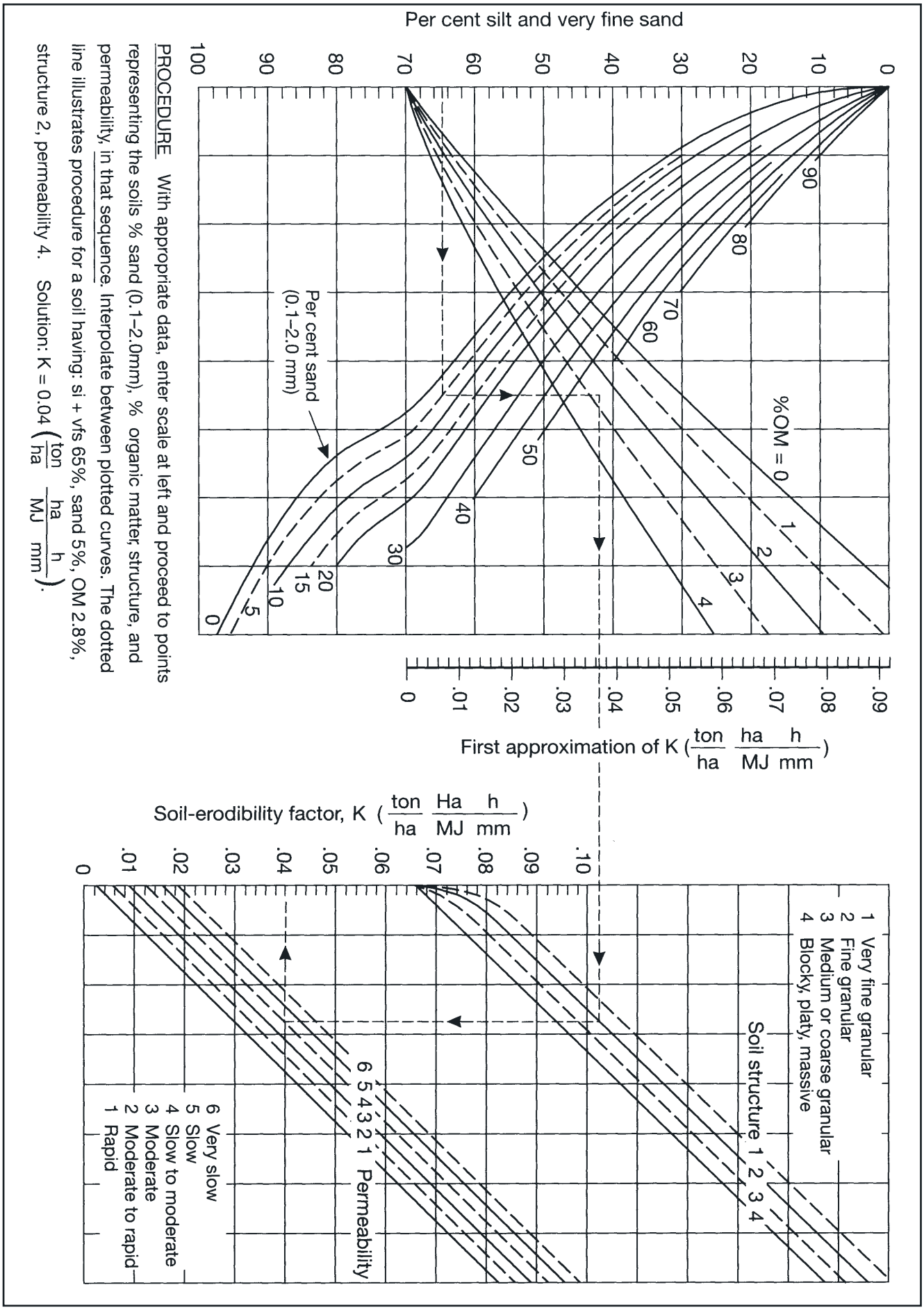
(c) "Soil structure" is described in the following grades:

- 1 – very fine granular where particles are mostly less than 1 mm diameter
- 2 – fine granular where particles are mostly 1 to 2 mm diameter
- 3 – medium or coarse granular where particles are mostly 2 to 10 mm diameter
- 4 – blocky, platy or massive.

(d) "Profile permeability" refers to the rate of infiltration of water (Ksat) into the whole soil profile as follows:

- 1 – rapid, greater than 130 mm per hour (includes most Soil Hydrologic Group A (Table F2))
- 2 – moderate to rapid, 60 to 130 mm per hour (incudes some Soil Hydrologic Group B and some Group A)
- 3 – moderate, 20 to 60 mm per hour (includes some Soil Hydrologic Group B)

3. Rosewell (1993b) is an excellent program for estimating the K-factor in Australia. However, the program was developed for use in agricultural situations and should not be used on other lands except to derive the K-factor.



PROCEDURE With appropriate data, enter scale at left and proceed to points representing the soils % sand (0.1–2.0mm), % organic matter, structure, and permeability, in that sequence. Interpolate between plotted curves. The dotted line illustrates procedure for a soil having: si + vfs 65%, sand 5%, OM 2.8%, structure 2, permeability 4. Solution: $K = 0.04 \left(\frac{ton}{ha} \frac{ha}{MJ} \frac{h}{mm}\right)$.

Figure A3 Soil erodibility nomograph in SI units (Foster et al., 1981)

- 4 – slow to moderate, 5 to 20 mm per hour (incudes some Soil Hydrologic Group B and some Group C)
- 5 – slow, 1 to 5 mm per hour (includes some Soil Hydrologic Group C)
- 6 – very slow, <1 mm per hour (includes all Soil Hydrologic Group D).

In addition, Rosewell (1993) suggests that:

(i) Soils where the subsoil structure grade is moderate or strong or where the texture is coarser than silty clay are usually Class 3;

(ii) Soils that have moderately permeable topsoils underlain by silty clays or silty clay loams with weak subangular or angular blocky structures are usually Class 4;

(iii) Permeable surface soils overlying massive clays or silty clays are usually Class 5; and

(iv) All soils with hardpans or other impervious layers near the surface (see figure F1) are usually Class 6.

(e) "Gravel" describes those particles from 2 to 60 mm diameter. Do not enter data here if the permeability class already includes an allowance for the effect of rock fragments. Rocks on the surface should be treated as surface cover and allowed for in the *C*-factor.

Probable conservative values for subsoil K-factors of many New South Wales soils are provided at Appendix C. Here, various soil landscape data prepared by the Department of Infrastructure Planning and Natural Resources (DIPNR) are listed. The DIPNR data are derived from 1:100 000 scale mapping and, consequently, might not apply to any particular site especially on highly variable Soil Landscapes, e.g. alluvial units. On highly variable units and/or on sensitive sites and/or where Appendix C does not contain soils information for a site, obtain K from data derived for the local soils and applied to figure A3 or the SOILOSS program.

Arguably, the K-factor is the least accurate component of the RUSLE. It has special weaknesses on soils that are strongly stabilised by iron and on those that are highly dispersible.[4] The problem of strongly stabilised soils can be addressed by ensuring that a chemical dispersion agent (e.g. Calgon) is not used before particle size analysis, i.e. dispersion is achieved only through mechanical means. However, there is very little data to show the effect of soil dispersion on the K-factor. Nevertheless, it is suggested that the K-factor be increased by 20 percent for all Emerson Aggregate Class 1 and 2 soils. No further advice can be given at this time.[5]

4. Usually, soils that are strongly stabilised by iron are red and well aggregated (e.g. Krasnozems). Some of their clay fraction exists as very small aggregates in the silt and fine sand-size range, the most erodible size. Dispersible soils usually have high levels of exchangeable sodium on the clay fraction, and low levels of soluble salts in the soil (see Section 6.3.3 and Appendix E).
5. Research by Singer *et al.*, (1982) suggests that K-factor values determined using the methods outlined here should be increased by 20 percent where the exchangeable sodium percentage exceeds 2.

A4 Slope Length/Gradient Factor – LS

The slope length–gradient factor, LS, describes the combined effect of slope length and slope gradient on soil loss. It is the ratio of soil loss per unit area at any particular site to the corresponding loss from a specific experimental plot of known length and gradient. Take typical upper values for slope length (metres) and gradient (percent) for the site in question and apply them to Table A1.

In the RUSLE, different LS-factors apply to low, moderate and high ratios of rill to interill erosion:

- low ratio applies to undisturbed grazing/pasture lands with good cover (e.g. many construction sites before works start) – Option 1
- moderate applies to moderately consolidated crop lands with little to moderate cover (the default used in SOILOSS) – Option 2
- high applies to highly disturbed lands with little or no cover (e.g. most operational construction sites) – Option 3.

No experimental data exist to support the LS-factor for undisturbed soils (Option 1) on slopes steeper than 60 percent. Further, only limited data are available for disturbed soils (Option 3) on slopes of less than 5 metres length and steeper that 84 percent. Because SOILOSS defaults to Option 2 and construction sites should be using Option 3, any LS data from SOILOSS should be adjusted according to Table A1. Note that, generally, LS should be kept below 10.00 on construction sites.

Table A1 LS-factors on construction sites using the RUSLE

Slope ratio	Slope gradient (%)	Slope length (m)														
		5	10	20	30	40	50	60	70	80	90	100	150	200	250	300
100:1	1	0.09	0.11	0.13	0.15	0.16	0.17	0.18	0.19	0.19	0.20	0.20	0.23	0.24	0.26	0.27
50:1	2	0.14	0.18	0.24	0.28	0.31	0.34	0.36	0.39	0.41	0.43	0.44	0.52	0.58	0.64	0.69
33.3:1	3	0.17	0.24	0.34	0.41	0.47	0.52	0.57	0.61	0.65	0.69	0.72	0.87	1.00	1.11	1.22
25:1	4	0.21	0.30	0.44	0.54	0.63	0.71	0.78	0.85	0.91	0.97	1.03	1.26	1.47	1.65	1.82
20:1	5	0.24	0.36	0.54	0.68	0.80	0.91	1.01	1.10	1.19	1.27	1.35	1.70	2.00	2.28	2.53
16.6:1	6	0.28	0.42	0.64	0.81	0.97	1.11	1.24	1.36	1.47	1.58	1.68	2.14	2.54	2.91	3.25
12.5:1	8	0.34	0.53	0.83	1.08	1.31	1.51	1.70	1.88	2.05	2.21	2.37	3.07	3.70	4.28	4.82
10:1	10	0.42	0.68	1.09	1.44	1.75	2.04	2.31	2.56	2.81	3.04	3.27	4.06	4.94	5.75	6.52
8.3:1	12	0.52	0.85	1.39	1.85	2.27	2.66	3.02	3.37	3.70	4.02	4.33	5.77	7.07	8.28	9.42
7.1:1	14	0.62	1.02	1.69	2.26	2.79	3.28	3.74	4.18	4.61	5.02	5.42	7.27	8.95	10.52	12.01
6.3:1	16	0.71	1.19	1.98	2.67	3.31	3.90	4.46	5.00	5.52	6.02	6.51	8.78	10.86	12.81	14.65
5.5:1	18	0.80	1.35	2.27	3.07	3.82	4.51	5.17	5.81	6.42	7.02	7.59	10.30	12.78		
5:1	20	0.89	1.50	2.55	3.47	4.32	5.12	5.88	6.61	7.32	8.01	8.68	11.92	14.84		
4:1	25	1.09	1.88	3.23	4.43	5.54	6.59	7.60	8.57	9.51	10.43	11.32				
3.3:1	30	1.28	2.23	3.86	5.32	6.69	7.99	9.23	10.43	11.60	12.74	13.85				
2.5:1	40	1.61	2.83	4.98	6.92	8.74	10.48	12.15	13.77							
2:1	50	1.88	3.33	5.89	8.22	10.42	12.52	14.55								

Table A1 assumes that on Soil Loss Classes 3, 4, 5, 6 or 7 lands where more than 1,000 square metres of land are to be disturbed, slope lengths do not exceed 80 metres immediately before forecast rainfall or during shutdown periods (Section 4.3.1). Longer slopes might be acceptable where the calculated average annual soil loss from the total area of land disturbance is maintained at low levels (e.g. <150 cubic metres per year).

A5 Erosion Control Practice Factor – P

The erosion control practice factor, P, is the ratio of soil loss with a nominated surface condition ploughed up and down the slope. It is reduced by practices that reduce both the velocity of runoff and the tendency of runoff to flow directly downhill. At construction sites, it reflects the roughening or smoothing of the soil surface by machinery (figure A4).

Table A2 suggests appropriate values for P for construction sites. While changing the surface condition does not greatly affect P, roughening of the surface greatly increases the chances of establishment of a vegetative cover that does substantially reduce soil loss.

Figure A4 Smooth and compact ground surface typical of an urban construction site, raising the P-factor as high as 1.3

Table A2 P-factors for construction sites (Goldman et al., 1986)

Surface condition	P-factor
Compacted and smooth	1.3
Track-walked along the contour[6]	1.2
Track-walked up and down the slope[7]	0.9
Punched straw[8]	0.9
Loose to 0.3 metres depth	0.8

A6 Cover Factor – C

The cover factor, C, is the ratio of soil loss from land under specified crop or mulch conditions to the corresponding loss from continuously tilled, bare soil. The *C*-factor is different from the runoff coefficient used in hydrologic calculations.

The most effective method of reducing the *C*-factor is maintenance, or formation of a good ground cover such as outlined in Chapter 7. The best practices (Table A3, figure A5) are those that reduce both the soil exposed to raindrop impact and the erosive effects of runoff. Figure A6 shows the effect of different land uses on calculated average annual soil loss where the R-factor is 2,500, the K-factor is 0.035, the gradient is 10 percent and the slope length is 100 metres. The P and *C*-factors were:

- the defaults used in the SOILOSS program (Rosewell, 1993) for cultivation, forest and pasture
- those presented here at Sections A5 and A6 for a construction site.

Note that the *C*-factor provides gross information only. It does not give a true indication as to the fraction retained. Table A4 provides data on this matter based on University of Washington research. The table assumes proper installation and maintenance of the practice.

6. Track marks are orientated normal to the contours.
7. Track marks orientated parallel to the contour.
8. Straw mulch has been punched into a loose ground surface with a disc harrow.

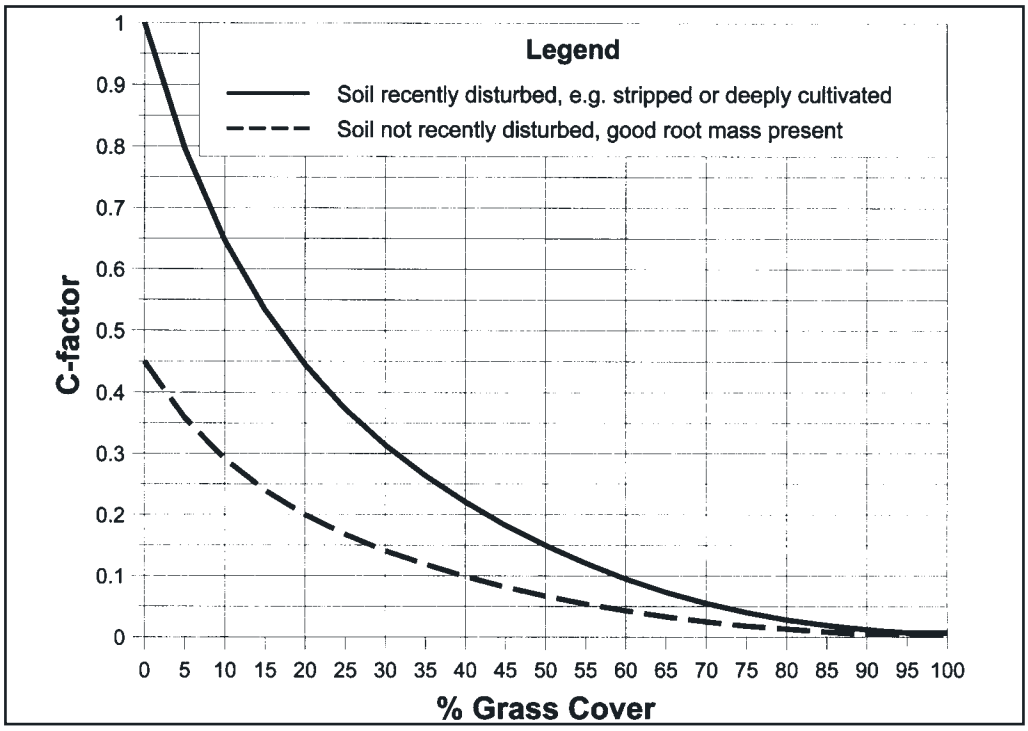


Figure A5 C-factors for established grass cover

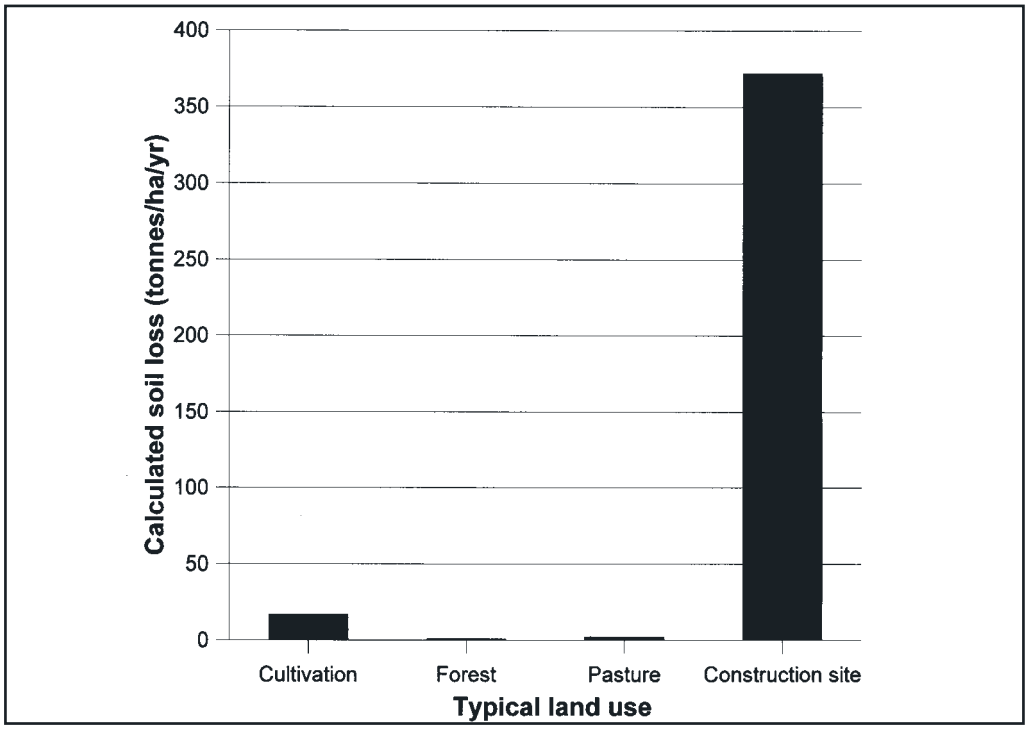


Figure A6 Calculated annual soil losses for different land uses

Table A3 Soil Stabilisation Control Matrix (adapted from various sources, including Meyer and Ports (1976), Israelson et al. (1980), Goldman et al. (1986), URS Greiner Woodward Clyde (1999) and the North American Green website).

Class	Type	Suitable for Vegetation Type [1]	Design Life (months)	Use in Concentrated Flow [2]	Availability (days) [3]	Relative Cost Bracket [4]	Residual Impact [5]	*C* -factor [6] <33%, <6m	*C* -factor <33%, 6-15m	*C* -factor <33%, >15m	*C* -factor 33-50%, <6m	*C* -factor 33-50%, 6-15m	*C* -factor 33-50%, >15m
BIODEGRADABLE MULCHES [7]													
Straw (anchored)	4.5 tonnes per hectare	Grass	1 to 6	No	< 5days	Low	Moderate	0.17	0.17	0.20	0.20	0.20	0.20
Wood Chip	16 tonnes per hectare	Grass/Shrubs	1 to 6	No	< 5days	Low	Moderate	0.08	0.08	0.08	No data		
Wood Chip	27 tonnes per hectare	Shrubs	1 to 6	No	< 5days	Low	Moderate	0.05	0.05	0.05	No data		
Wood Chip	56 tonnes per hectare	Shrubs	1 to 6	No	< 5days	Low	Moderate	0.02	0.02	0.02	0.02	0.02	0.02
Hydromulching	1.5 tonnes mulch + 300 litres binder per hectare	Grass	1 to 3	No	< 5days	Low	Low	0.00	0.03	0.07	0.03	0.06	0.10
Bonded Fibre	5 tonnes fibre per hectare	Grass	1 to 6	No	< 5days	Low	Moderate	0.00	0.03	0.07	0.03	0.06	0.10
ROLLED EROSION CONTROL PRODUCTS (RECPs) [7]													
Biodegradable	Jute mesh	Grass	6 to 12	Yes	< 5days	Low	Moderate	0.10	0.20	0.40	0.20	0.40	0.60
	Coconut fibre mesh	Grass	6 to 12	Yes	< 5days	Low	Moderate	0.10	0.20	0.40	0.20	0.40	0.60
	Curled wood fibre	Grass	6 to 12	Yes	< 5days	Medium	Moderate	0.01	0.05	0.10	0.10	0.15	0.20
	Jute matting (~350 gsm)	Grass	6 to 12	Yes	< 5days	Medium	Moderate	0.00	0.03	0.07	0.03	0.06	0.10
	Jute matting (~600 gsm)	Shrubs	6 to 12	Yes	< 5days	Medium	Moderate	0.00	0.03	0.07	0.03	0.06	0.10
	Coconut fibre matting (~450 gsm)	Grass	6 to 12	Yes	< 5days	Medium	Moderate	0.00	0.03	0.07	0.03	0.06	0.10
	Coconut fibre matting (~900 gsm)	Shrubs	6 to 12	Yes	< 5days	Medium	Moderate	0.00	0.03	0.07	0.03	0.06	0.10
Photodegradable	Mesh (< 5 mm openings)	Grass	1 to 6	Yes	< 5days	Low	Moderate	0.01	0.05	0.10	0.10	0.15	0.20
Non Biodegradable	Plastic fibres with netting	Grass	> 12	Yes	< 5days	High	High	0.00	0.05	0.10	0.03	0.05	0.10
	Composite with biodegradable	Grass/Shrubs	> 12	Yes	< 5days	High	High	0.00	0.03	0.07	0.03	0.06	0.10
HYDRAULIC SOIL STABILISERS [7]													
	Polymers/Polyacrylamide (rate depends on type)	Grass	1 to 6	No	< 5days	Low	Low	0.01	0.05	0.10	0.10	No data	
	Bitumen emulsion (12,000 l/ha)	Grass	1 to 6	No	< 5days	Low	Low	0.01	0.05	0.10	0.10	No data	
TEMPORARY SEEDING													
	Annual	NA	6 to 12	No	< 5days	Low	Low	0.05	0.05	0.10	0.10	No data	
	Perennial	NA	> 12	No	< 5days	Low	Low to moderate	0.05	0.05	0.10	0.10	No data	
INSTANT TURF [7]													
	Kikuyu	Grass	> 12	Yes	< 5days	Medium	Low	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Reinforced turf (pregrown)	Grass	> 12	Yes	5 - 15 days	High	High	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Notes

1 Whether vegetation is required and its type if so, will affect the technique used. Biodegradable mulches, RECPs and hydraulic soil stabilisers can all be used on their own to provide short term protection. However, their effectiveness is less when used in isolation than when used with vegetative growth. Most techniques are used to help establish vegetative growth using sown grasses. Should the client specify shrubs (primarily planted as tubestocks), then thicker mulches, RECPs or biodegradable mulches should be used. Non biodegradable RECP's are used to reinforce grasses (turf) permanently. They are not suitable for use with individual shrubs. They can work synergistically with the established grass to increase its resistance to shear stress and, therefore, increase its resistance to erosion by concentrated flow.

2 Products might or might not be suitable for use in areas of concentrated flow. All products are suitable for sheet flow conditions, although some would be over designed in such cases.

3 Whether or not a product is readily available is critical to the selection process. Many RECP and hydraulic soil stabiliser techniques use products that might be "off the shelf" and available from several suppliers. Biodegradable mulches can be affected by seasonal variation, although they might also be available on site after initial clearing and grubbing. Temporary seeding might also be seasonal.

4 For any given technique, cost can vary greatly depending on geographic location, size of project and installation requirements. In addition, costs can vary over time. Because of these factors, giving accurate installed costs is not possible. However, if a product is relatively inexpensive to purchase and install close to its point of manufacture, it will still be relatively inexpensive to purchase and install remote from it.

5 This criterion relates to the impact that a particular practice might have on construction activities once they are resumed on an area that was temporarily stabilised.

6 The performance of an erosion control technique is quantified by assigning it with a C-factor (Appendix A). The C-factor will vary from close to zero for full cover, to 1.0 for no cover on highly disturbed soils. The C-factor strongly affects the soil loss calculation (RUSLE) and users need to be careful in specifying its value, particularly when values <0.01 are quoted. Note that the C-factor does not apply to conentrated flow.

Values for the C-factor are given for various slopes gradients and lengths and show that it can change dramatically with them. The values given are compiled from existing data and from inference between products of a similar nature. They are given as a guide only and do not profess to be accurate in all respects. Overall, accurate C-factors are only available for manufactured products, primarily from the USA (RECP's in particular) where extensive independent testing has been undertaken. Unfortunately, very little data is available for the "lower cost" options such as biodegradable mulches, jute mesh and hydraulic soil stabilisers. Wherever possible, the manufactures should be contacted for their latest data on acceptable C-factors.

For the RECP's in particular, the C-factors given here are for the product as installed with no vegetation. Note however that lower C-factors can be expected if vegetation is promoted with many RECP's. Indeed, non biodegradable RECP's are designed to work synergistically with turf and must be used with it.

7 For information on trade names and suppliers of these products, please phone the office of Australasian Chapter of the International Erosion Control Association on 1800 354 322 or (+61 2) 4677 0901.

Practice	*C*-factor	Turbidity factor	Loss factor for phosphorus
Open-weave jute mesh	0.4	0.97	0.7
Wood fibre mulch	0.01	0.04	0.4
Straw mulch	0.06	0.2	0.2
Woven straw blanket	0.08	0.2	0.13

Table A4 Factors for practices tested in University of Washington research

A7 Sediment Yields

A7.1 Sediment Delivery Ratio

The ratio of sediment yield at a given location to the sediment entrained in the erosion process is the sediment delivery ratio. The RUSLE can calculate the sediment entrained in the erosion process. Other factors influencing the sediment delivery ratio include:

- the drainage area
- the topography and channel density
- the relief and length of the watershed
- the presence of natural or built sediment traps
- rainfall characteristics
- coefficient of runoff.

Once a value has been determined for the sediment delivery ratio, sediment yield can be determined.

A7.2 The Modified USLE (MUSLE)

The Modified USLE (MUSLE) eliminates the need for a sediment delivery ratio in many situations. It is based on work by Williams (1975), who replaced the R-factor in the USLE with a term for runoff intensity to eliminate the need for a delivery ratio. This modified USLE (MUSLE) is shown in Equation 3.

$$Sy = a\,(V\,Qp)b\,K\,LS\,C\,P \quad \text{. . . . . Equation (3)}$$

where: *Sy* is the sediment yield in tonnes

a and *b* are coefficients

V is the volume of runoff for the event in cubic metres

Qp is the peak runoff rate for the event in cubic metres per second

K, LS, P and *C* are normal USLE factors.

The equation is identical to the USLE except that:

- *Sy* is sediment yield instead of soil loss
- *(VQp)*b is a runoff factor for sediment transport instead of the USLE rainfall erosivity factor R.

Studies in the USA, mainly for rainfall events, have produced coefficients of *a* = 89.6 and *b* = 0.56. Some references show the value of a = 11.8, which is for K in metric units rather than the SI units quoted here. A comparison on agricultural soils in southern Queensland (Freebairn *et al.*, 1989) shows that MUSLE explained better than 80 percent of the variance in the measured sediment yield.

A7.3 Water Erosion Prediction Project (WEPP)

The Water Erosion Prediction Project (WEPP) has been a major program of several US agencies to develop soil erosion prediction technology that will advance, and possibly replace the USLE in a few years. It is a physically based model, based on algorithms that simulate physical processes such as infiltration, detachment, sediment transport, etc. This contrasts with the USLE, which is based largely on empirical relationships.

The WEPP model operates by running a continuous simulation of most of the components of the water cycle on a daily time step. It contains components that model hydrology, plant growth and residue production, and erosion.

WEPP predicts runoff volume from a rainfall event using a water balance submodel. Depending on soil and cover conditions, this runoff may entrain soil particles. It determines:

- the total runoff volume
- average and maximum sediment yields (annual or storm-based)
- whether erosion is by rill and/or interill erosion processes
- where eroded sediment might be deposited
- the particle size composition of the eroded sediment
- whether further sediment might be entrained.

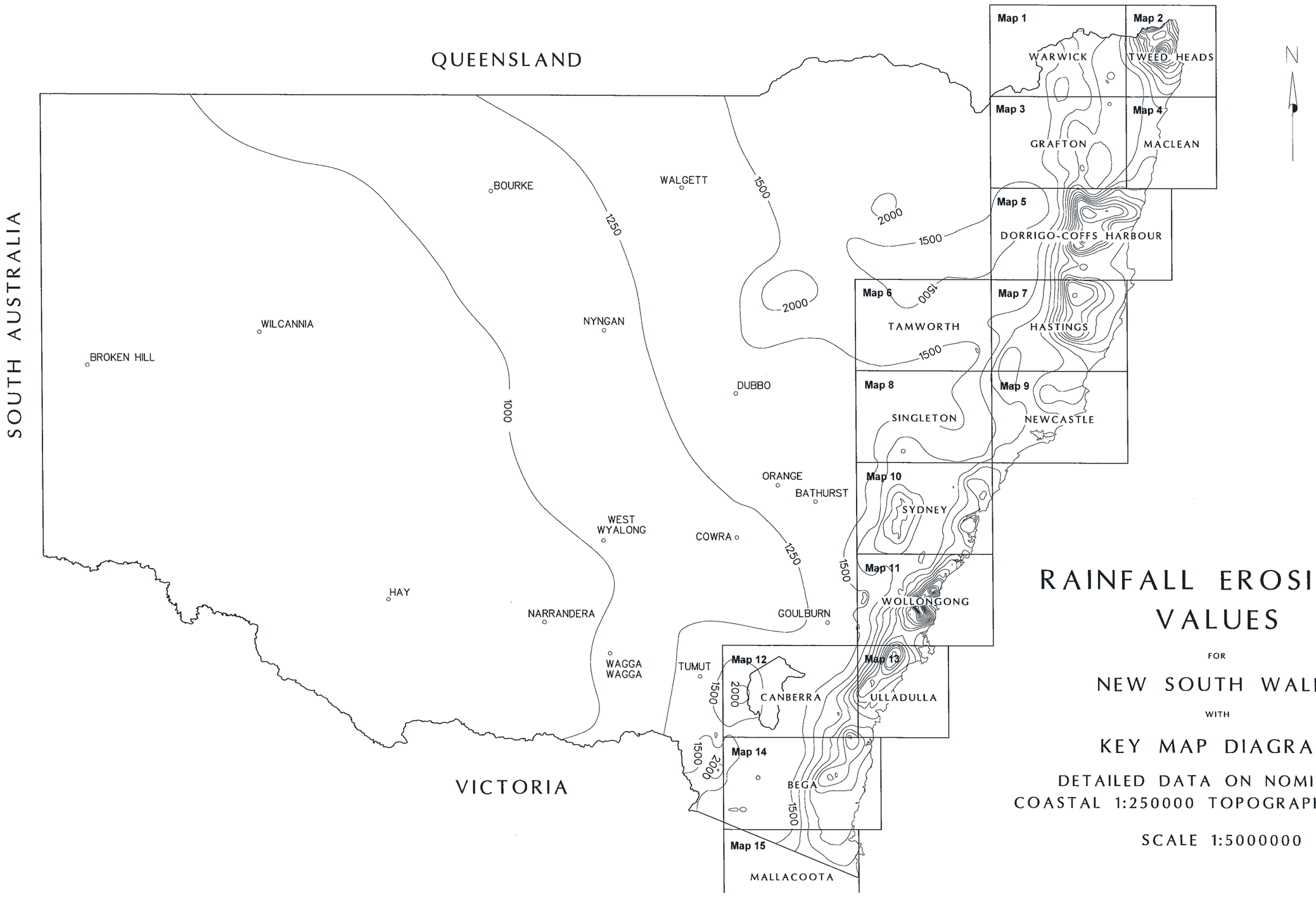
Unfortunately, WEPP requires a large data input, much more than the USLE. Evaluation of WEPP at Gunnedah, New South Wales, (Yu and Rosewell, 2001) shows that it has a good potential to provide a quantitative basis for further development of erosion hazard.

APPENDIX B

B R-factor Maps

Information relating to the R-factor is taken from data supplied by the Department of Land and Water Conservation, but under agreement with the copyright owners, The Institution of Engineers, Australia and the Australian Bureau of Meteorology. The data were captured at scale 1:1,000,000, so positional accuracy cannot be guaranteed at larger scales. In coastal areas, maps have been prepared to coincide with existing 1:250,000 topographic sheets published by National Mapping. For areas outside New South Wales, refer to figure A1 in Appendix A.

Base mapping was provided by NSW Department of Housing and adapted to the standard 1:250,000 map sheet areas. Map produced on Universal Transverse Mercator Projection with Geographical and Australian Map Grid coordinate reference systems. All mapping is subject to copyright.



RAINFALL EROSIVITY VALUES

FOR

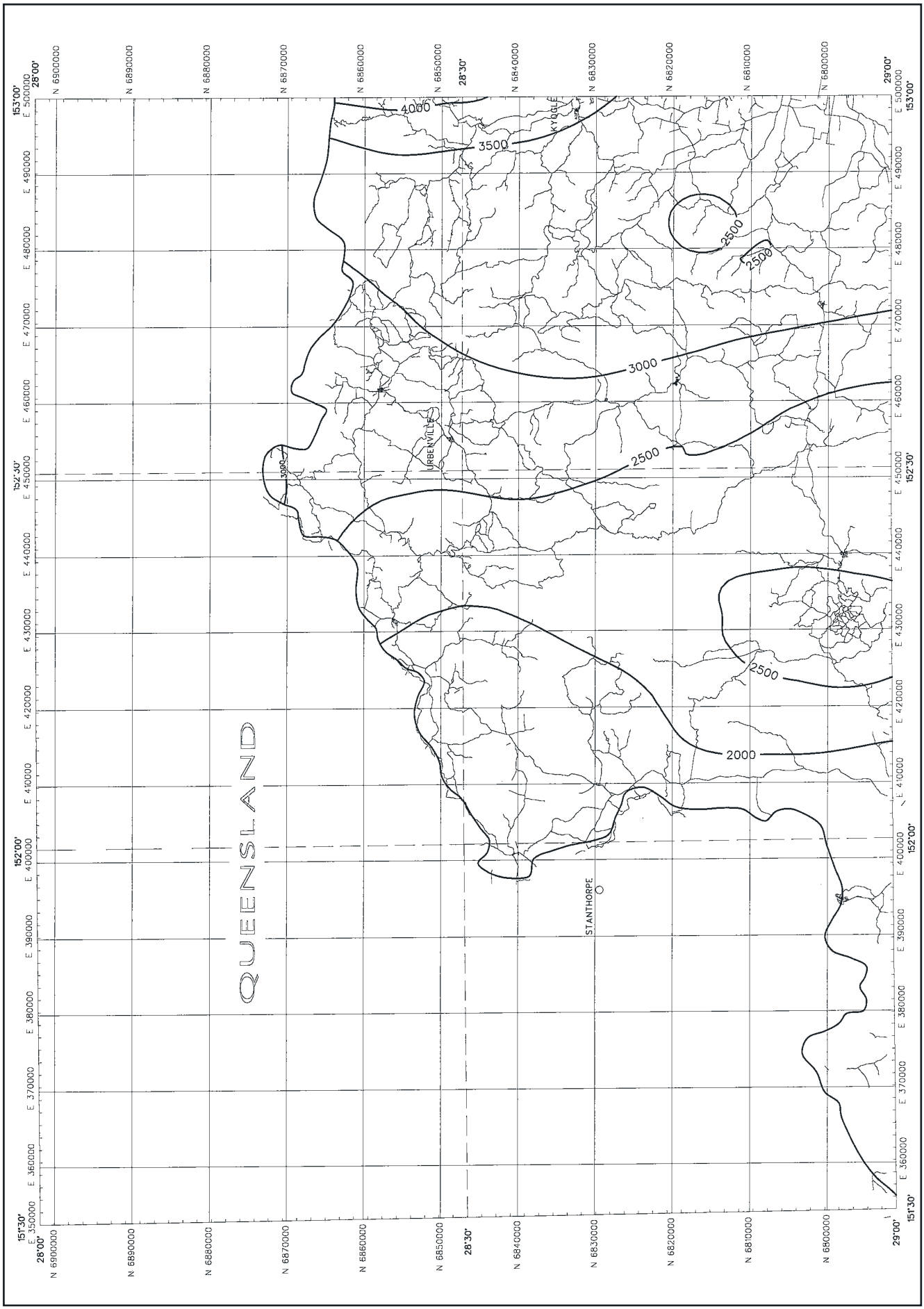
NEW SOUTH WALES

WITH

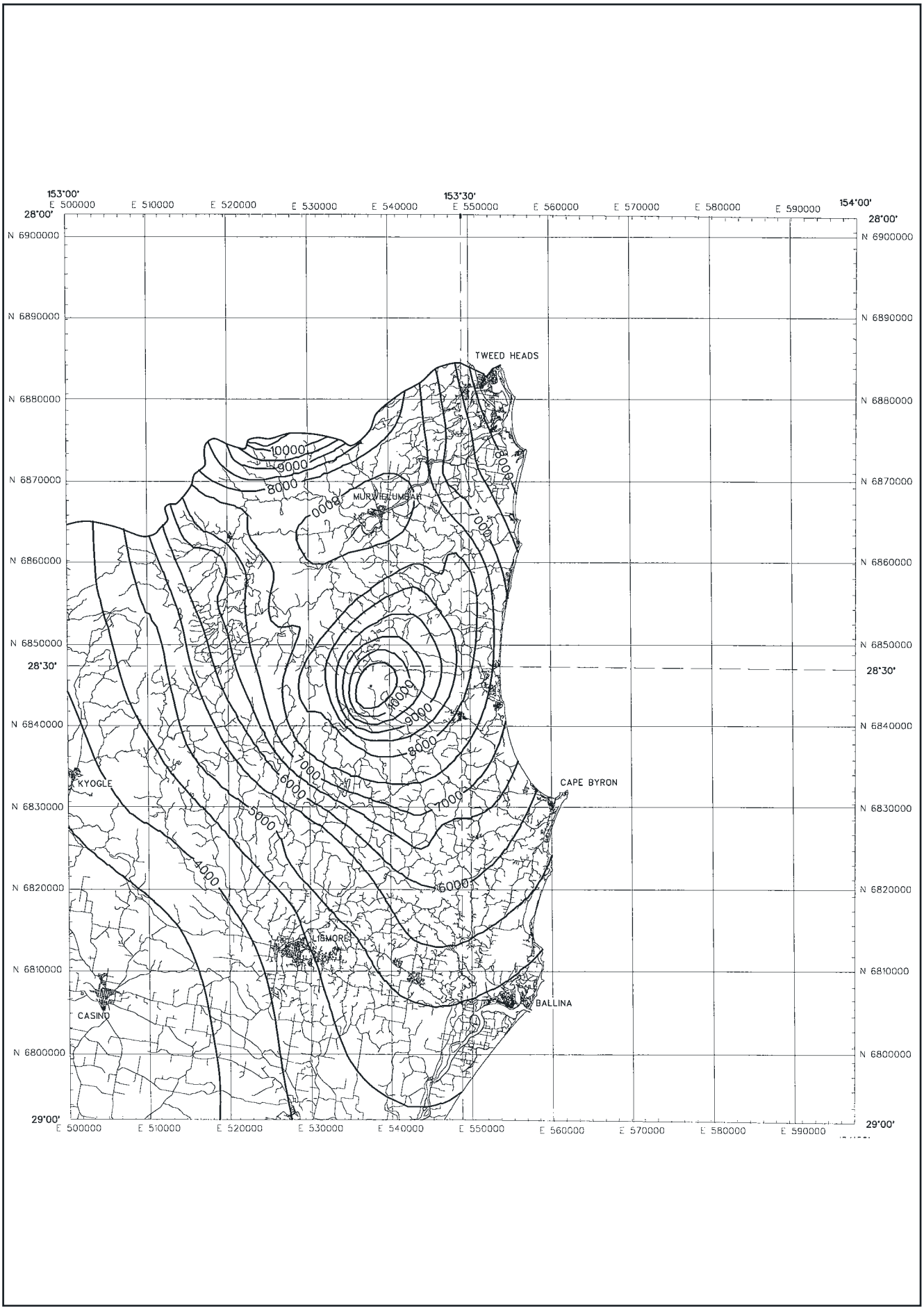
KEY MAP DIAGRAM

DETAILED DATA ON NOMINATED COASTAL 1:250000 TOPOGRAPHIC SHEETS

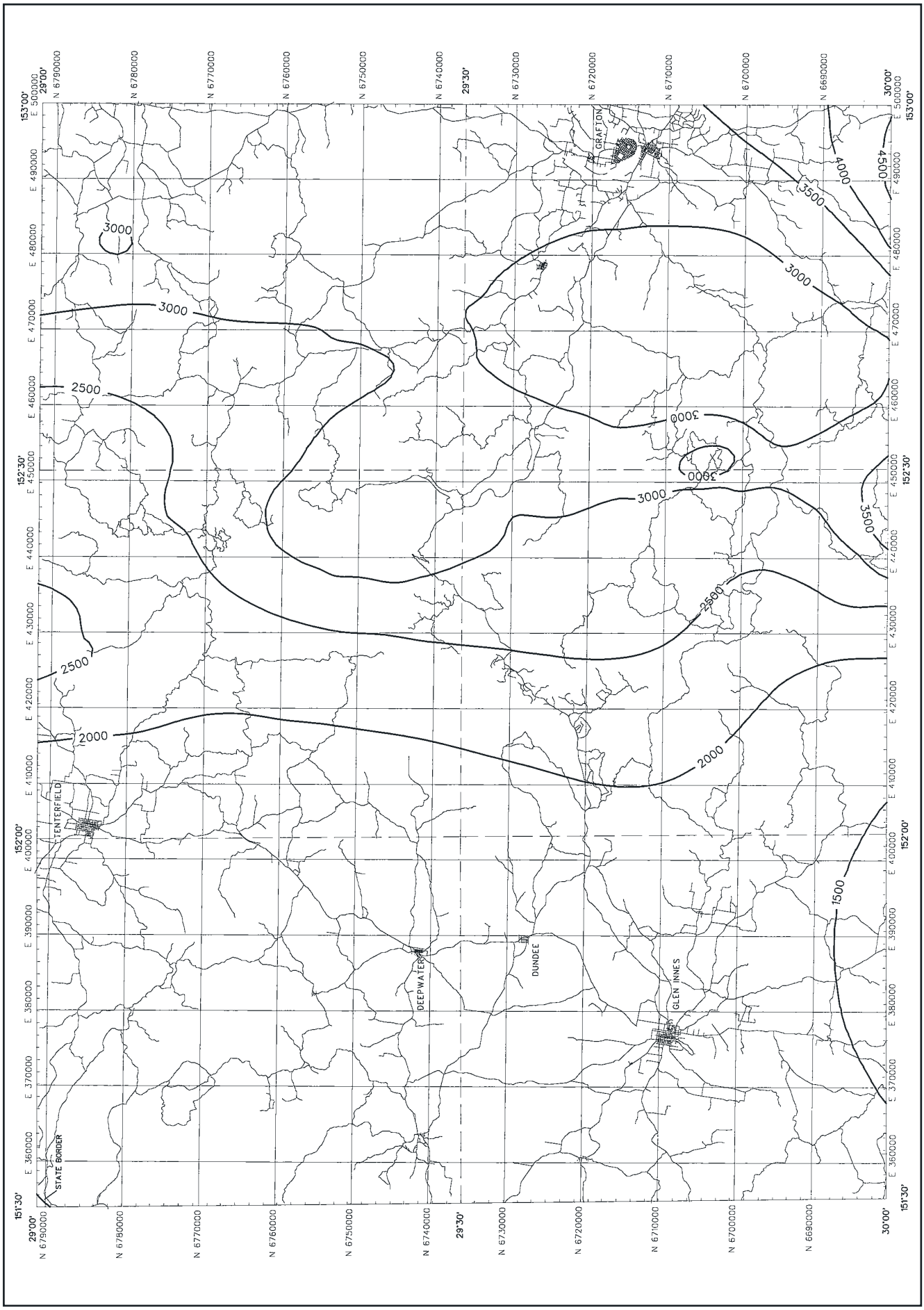
SCALE 1:5000000



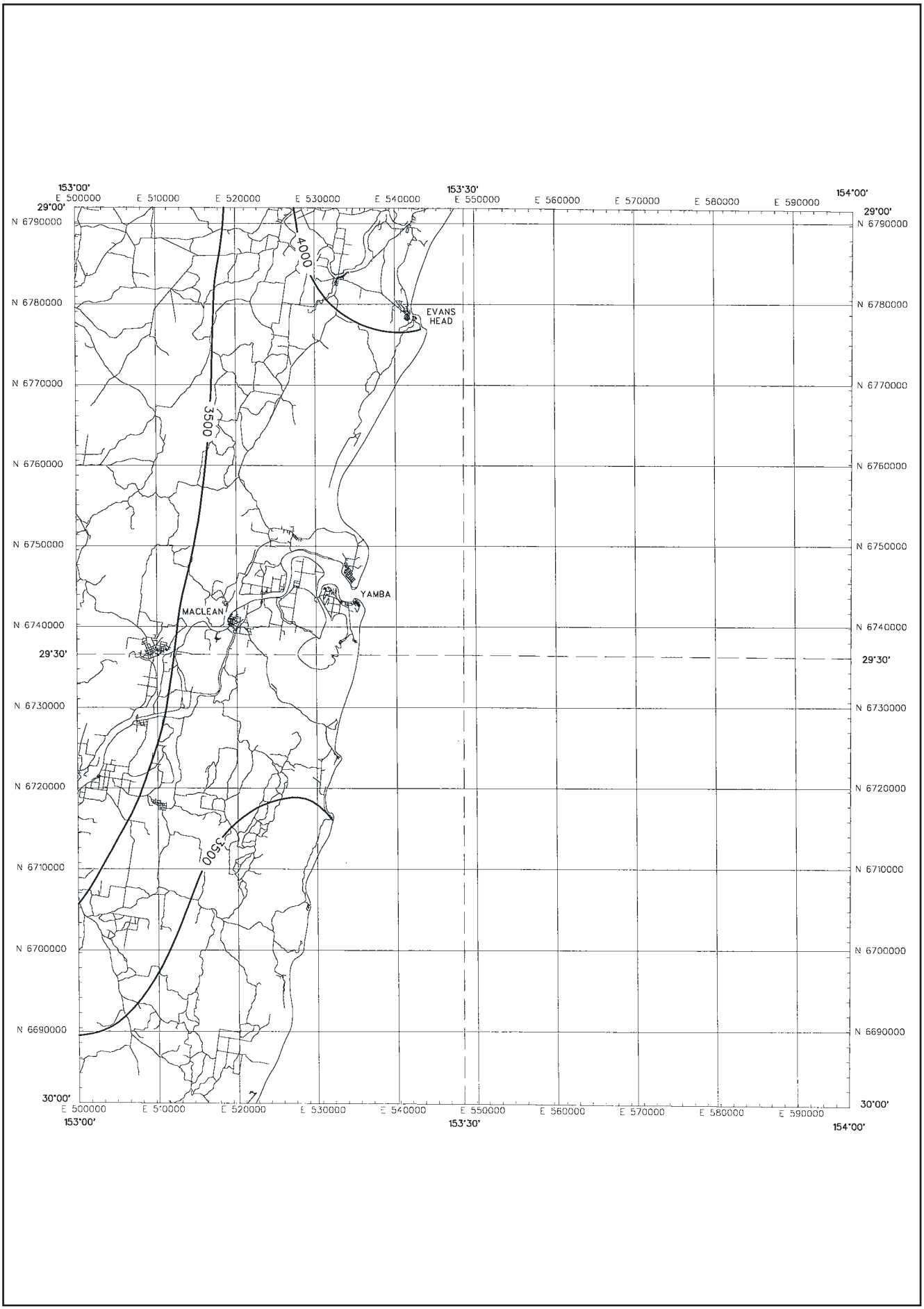
Map 1: Rainfall Erosivity of the Warwick 1:250,000 topographic Sheet



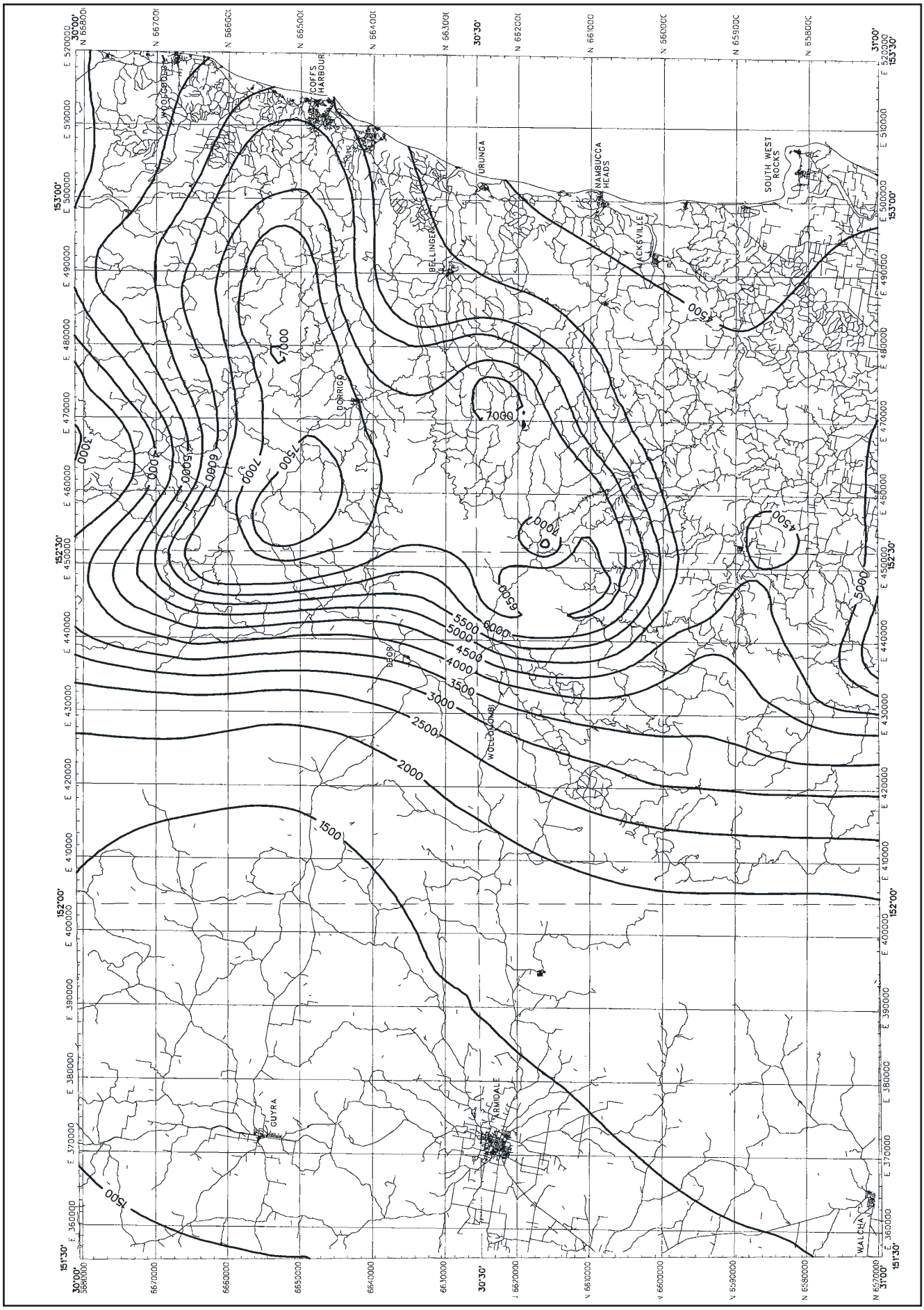
Map 2: Rainfall Erosivity of the Tweed Heads 1:250,000 topographic Sheet



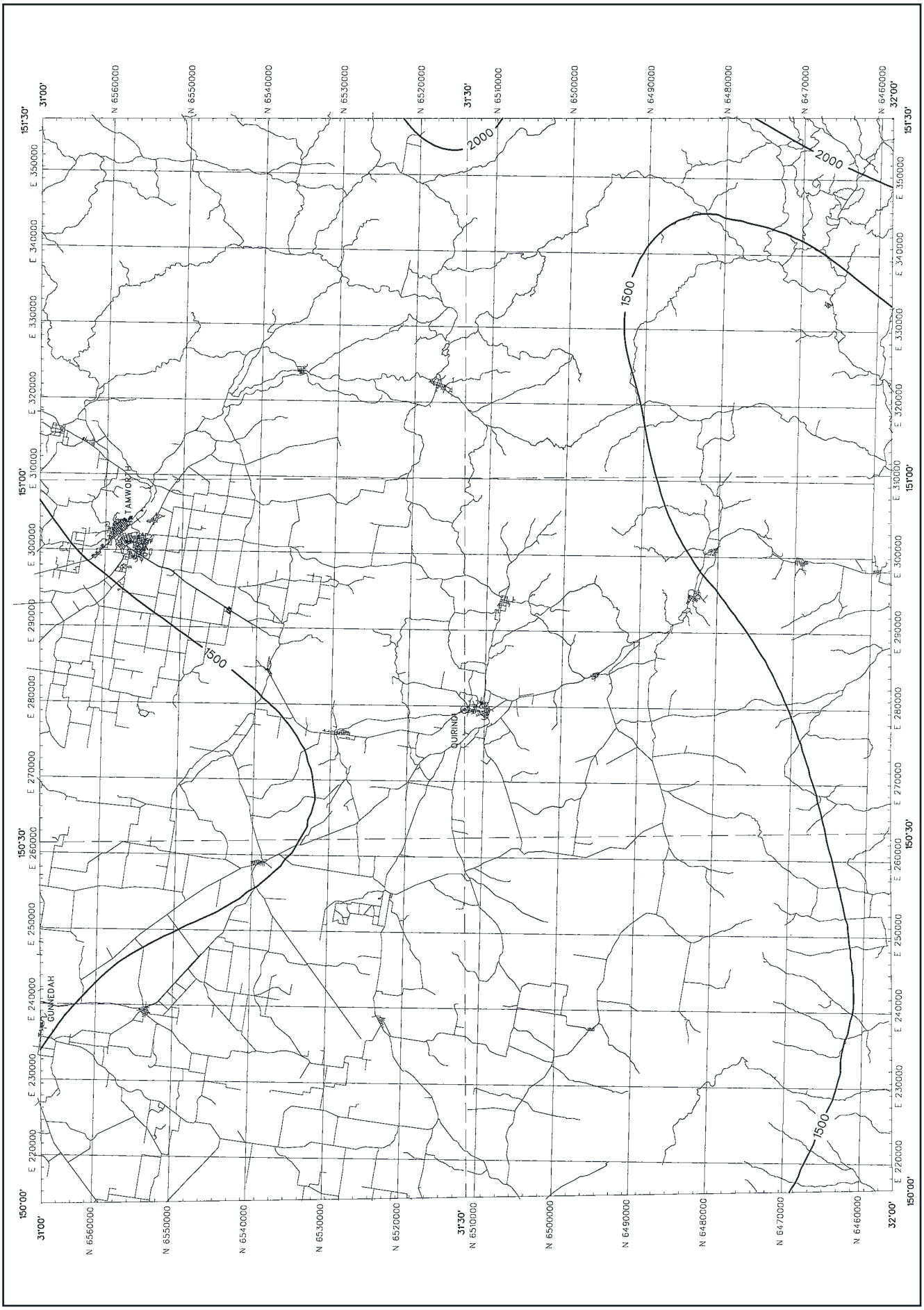
Map 3: Rainfall Erosivity of the Grafton 1:250,000 topographic Sheet



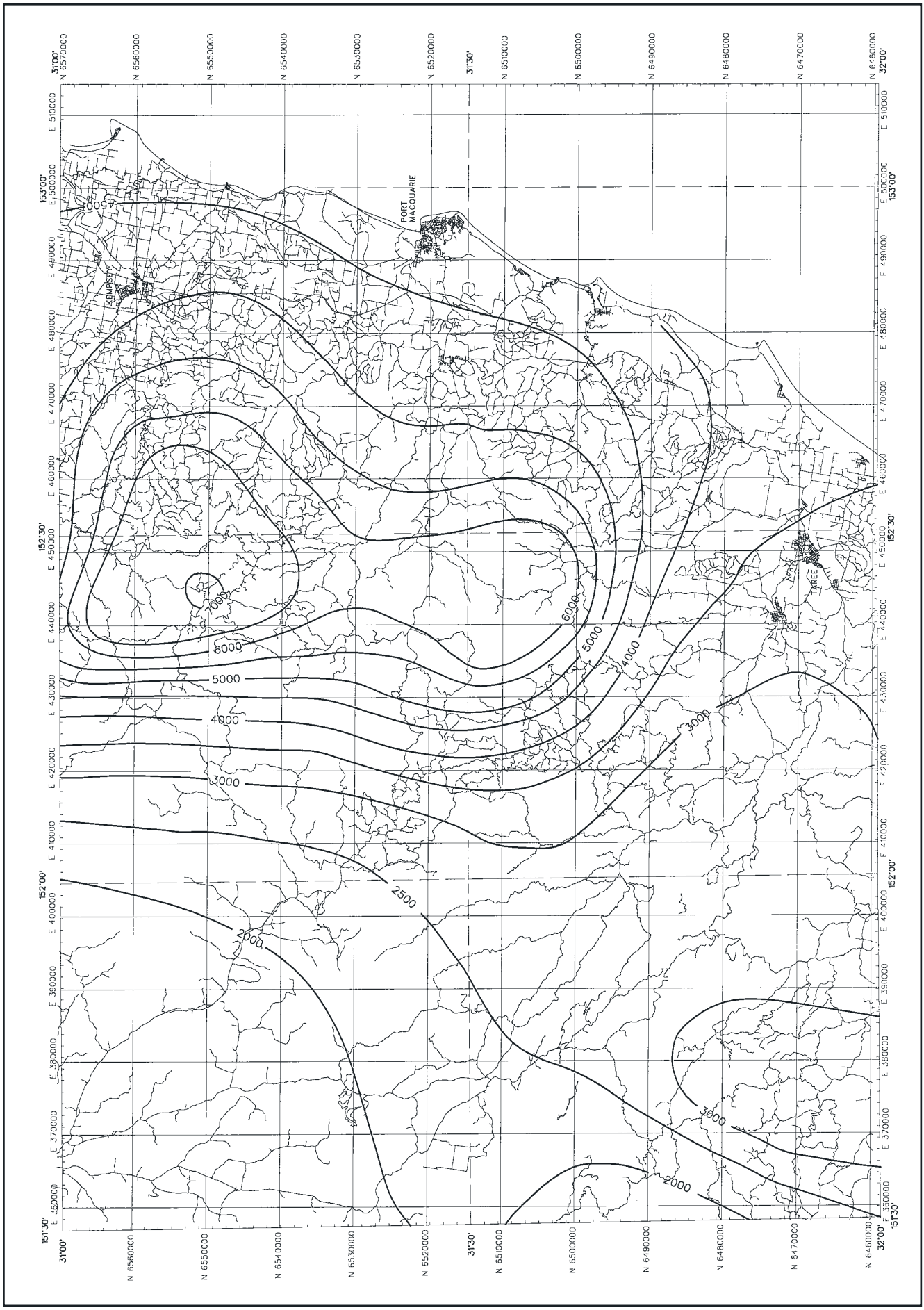
Map 4: Rainfall Erosivity of the MacLean 1:250,000 topographic Sheet



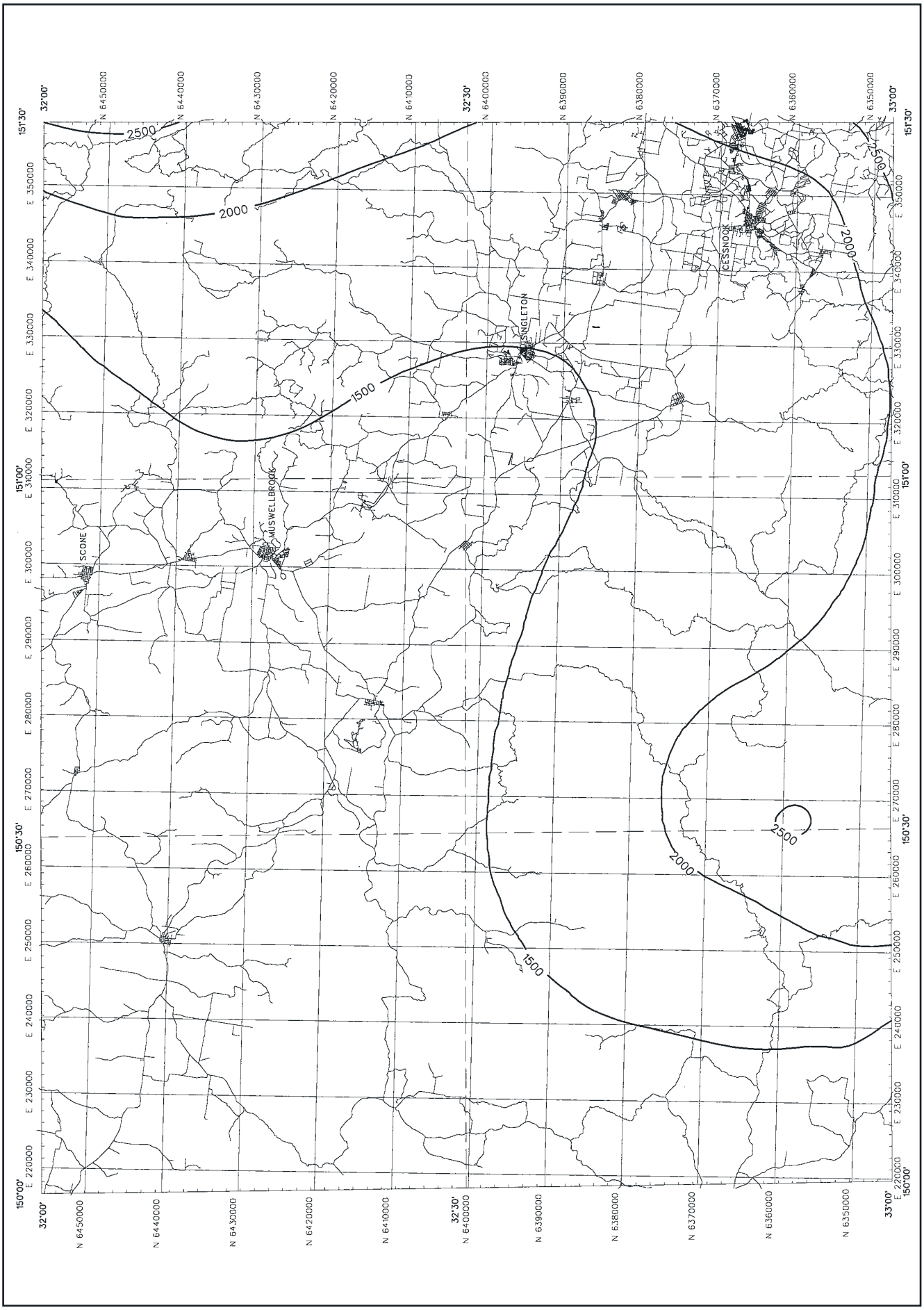
Map 5: Rainfall Erosivity of the Dorrigo 1:250,000 topographic Sheet



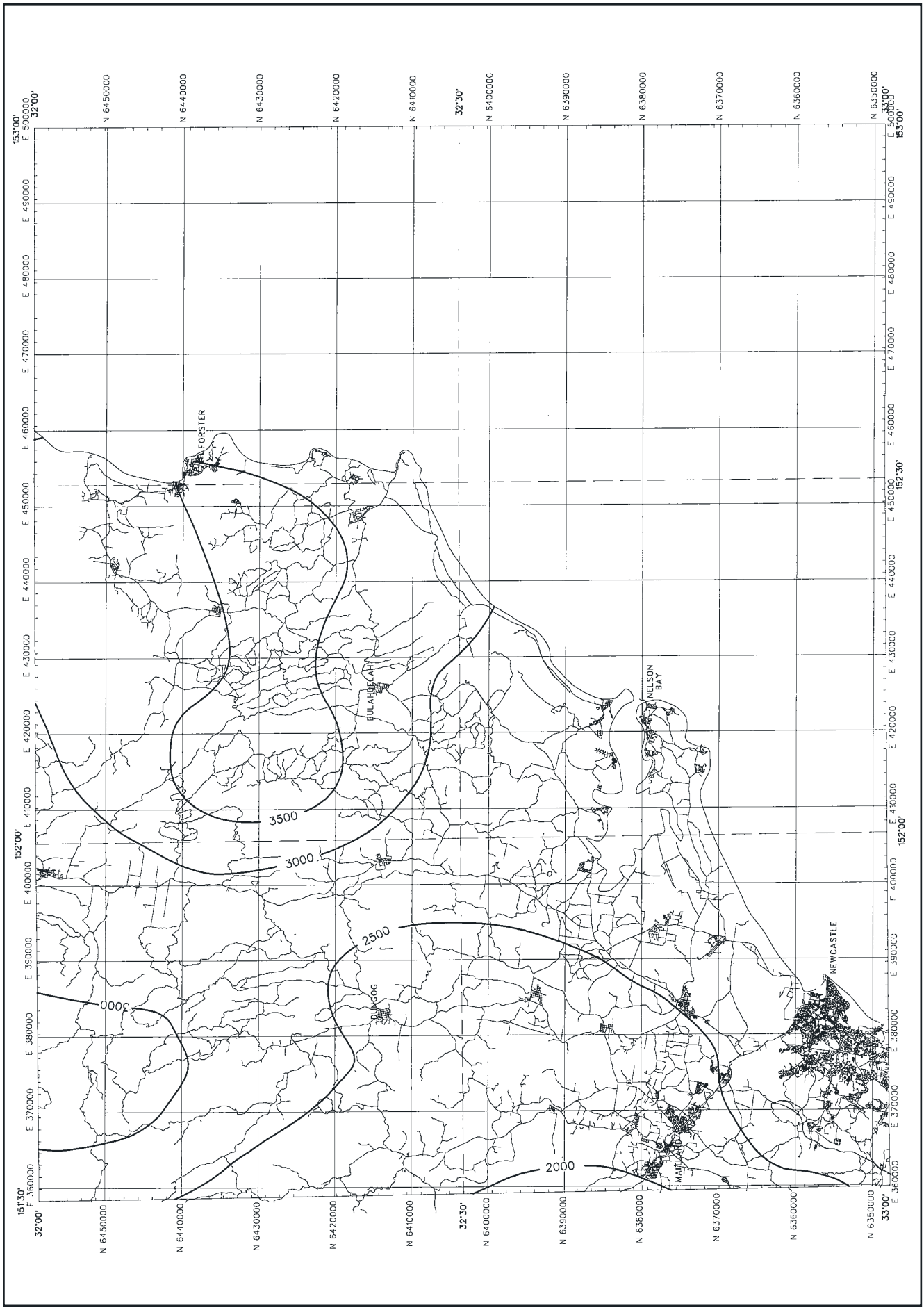
Map 6: Rainfall Erosivity of the Tamworth 1:250,000 topographic Sheet



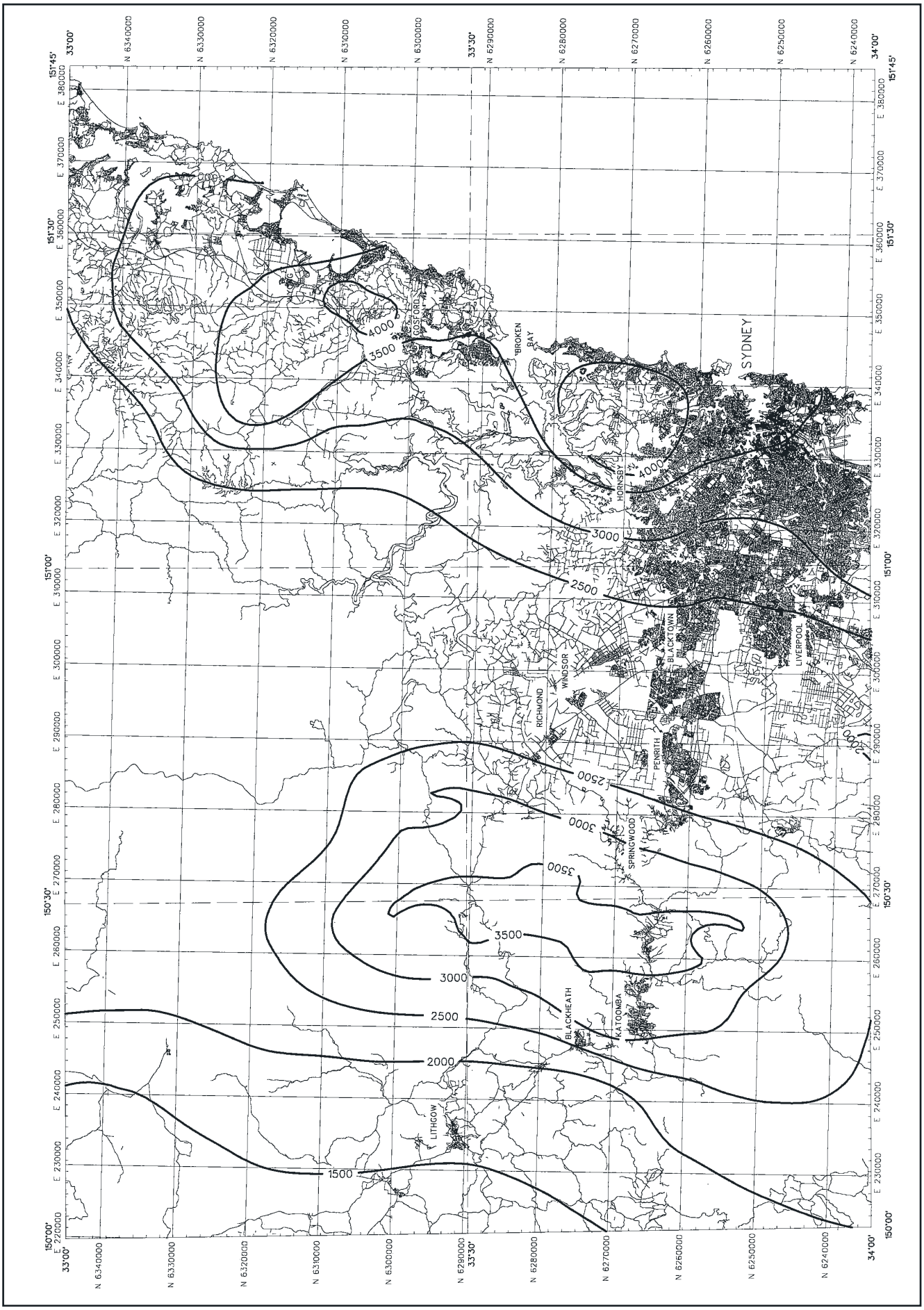
Map 7: Rainfall Erosivity of the Hastings 1:250,000 topographic Sheet



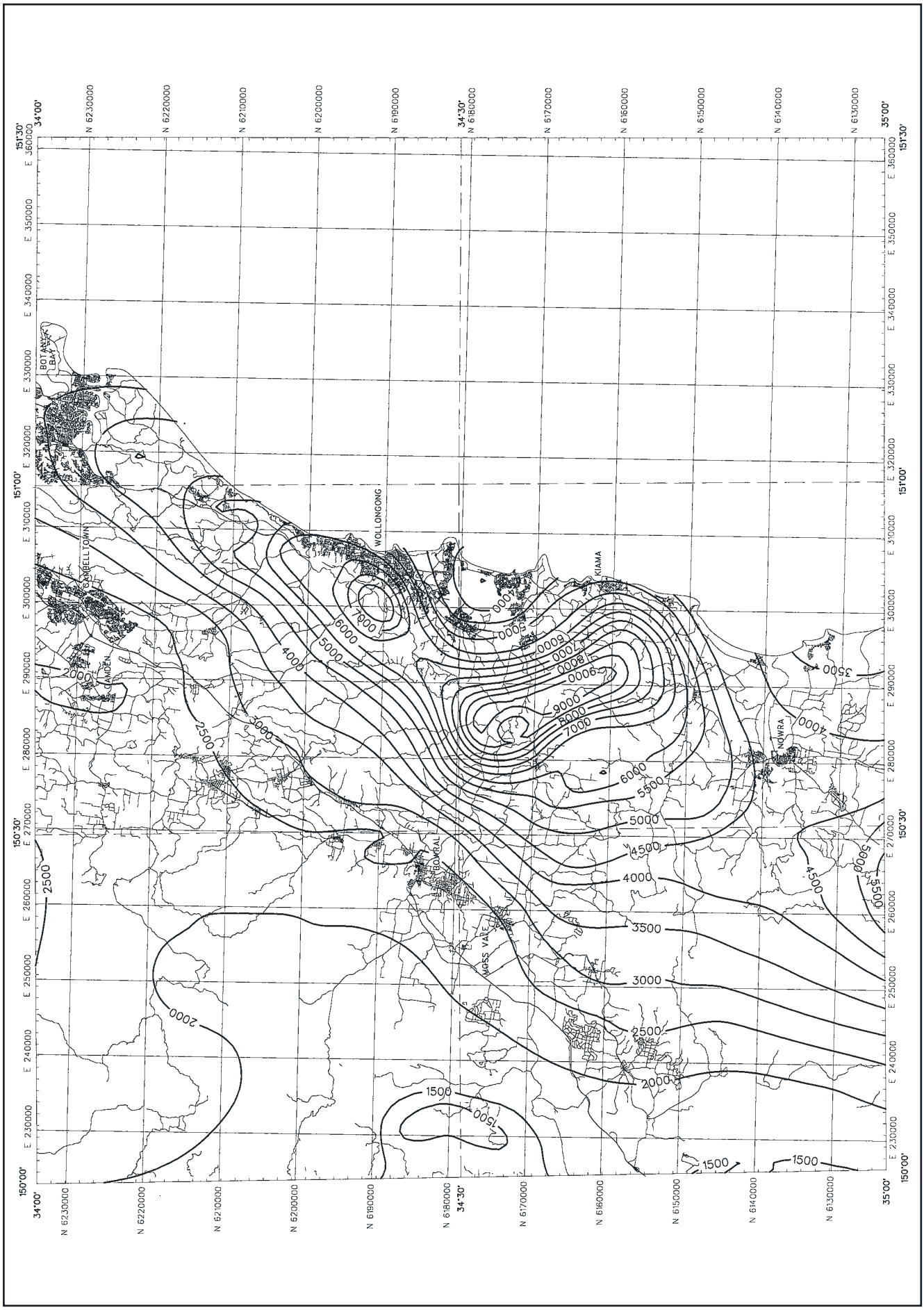
Map 8: Rainfall Erosivity of the Singleton 1:250,000 topographic Sheet



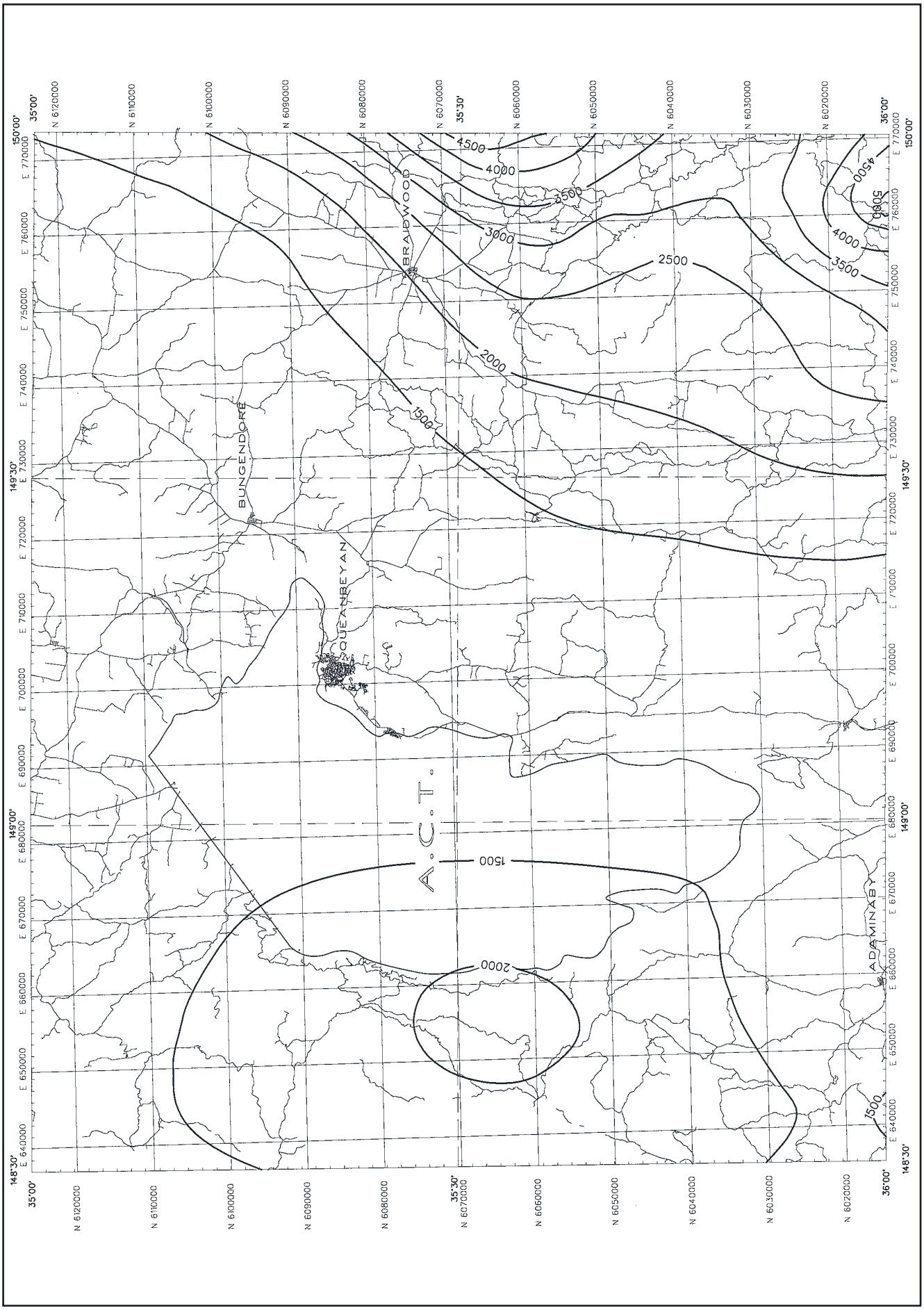
Map 9: Rainfall Erosivity of the Newcastle 1:250,000 topographic Sheet



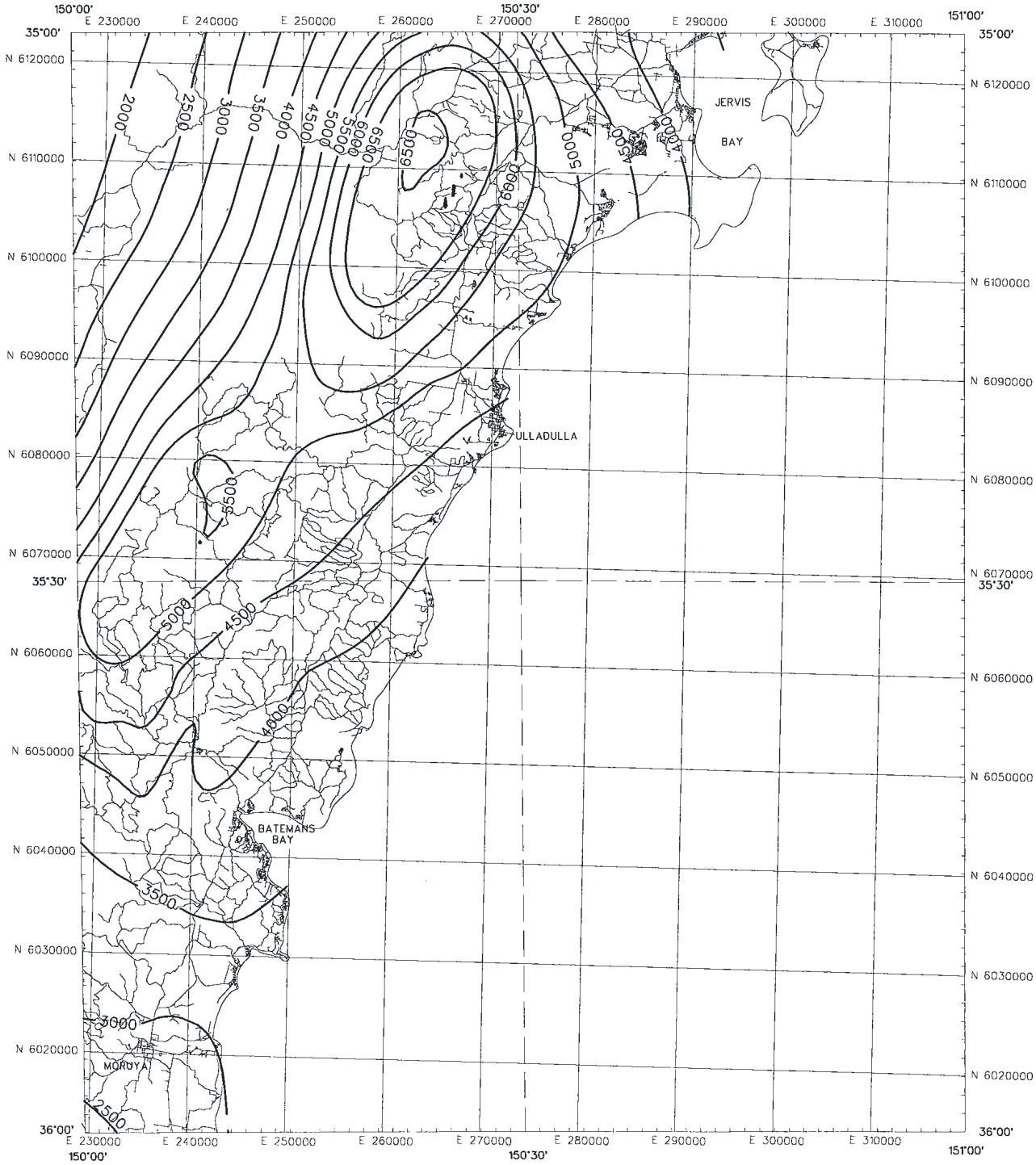
Map 10: Rainfall Erosivity of the Sydney 1:250,000 topographic Sheet



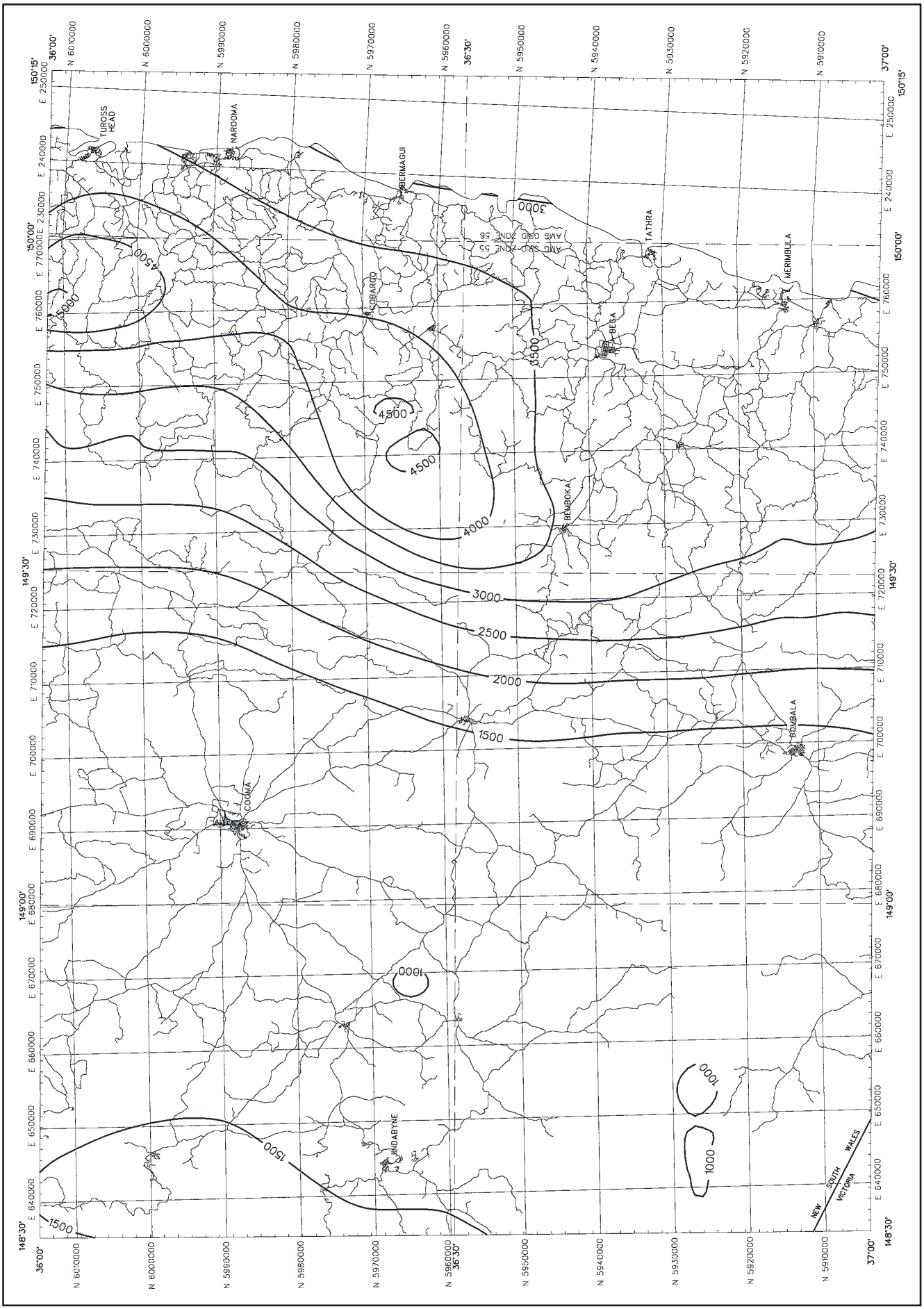
Map 11: Rainfall Erosivity of the Wollongong 1:250,000 topographic Sheet



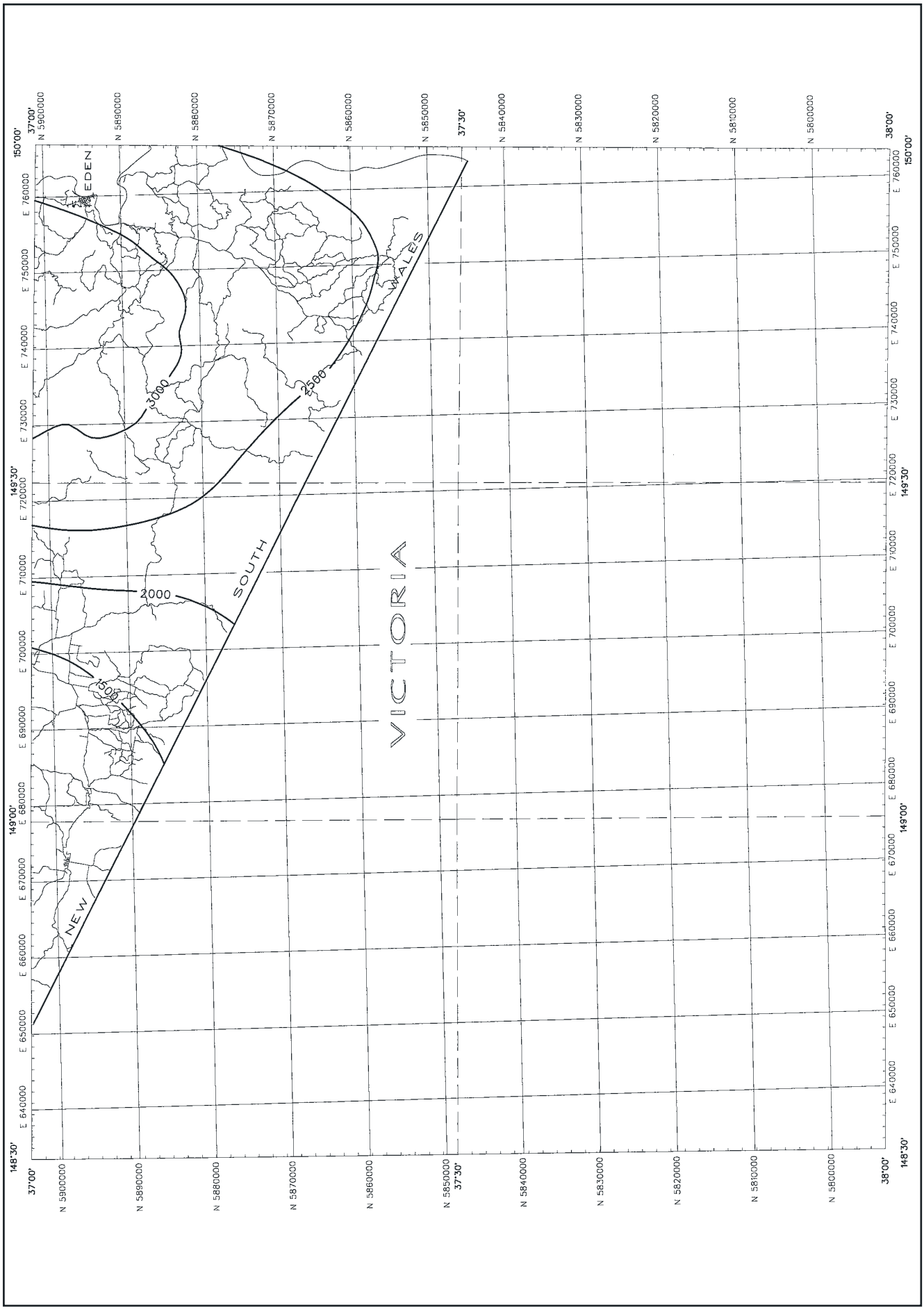
Map 12: Rainfall Erosivity of the Canberra 1:250,000 topographic Sheet



Map 13: Rainfall Erosivity of the Ulladulla 1:250,000 topographic Sheet



Map 14: Rainfall Erosivity of the Bega 1:250,000 topographic Sheet



Map 15: Rainfall Erosivity of the Mallacoota 1:250,000 topographic Sheet

APPENDIX C

C Constraints to Development

In the following tables, soil landscape names and other information have been taken from the current 1:100,000 soil landscape mapping prepared by the NSW Department of Infrastructure Planning and Natural Resources (DIPNR). Some information about constraints is presented here and can be used in fulfilment of the requirements of Chapter 3, other than on very sensitive or contentious sites. Site-specific information should be collected for these.

Understanding that these parameters are relevant to a mapping scale of 1:100 000 is important and, consequently, the described soil landscapes can include significant variations when considered at a particular location. These variations occur because mapping unit boundaries at scales of 1:100 000 allows errors of up to 250 metres of their true position, while the minimum mapping unit is about 30 hectares.

Further, the topographic position of a particular site and the specific soil forming factors that apply there can affect the soil characteristics. Variations can affect texture, structure, depth, permeability and drainage among others and so have a key role in runoff, erosion and pollution potential of exposed soil surfaces.

To improve the relevance and representativeness of the various parameters, experienced soil technicians can interpret these landscape attributes with published laboratory test results. These interpretations can give balanced assessments of soil hydrologic group, K-factor, sediment type and constraints to earthwork construction.

Arriving at the Parameters Presented in the Tables

Soil landscape

Soil landscape names and the two-letter soil layer nomenclature are drawn directly from DIPNR's 1:100 000 soil landscape maps and accompanying handbooks for NSW.

Where given, the *common constraints'* listing is derived directly from the published DIPNR soil landscape handbooks. Constraints selected are considered the most relevant to protecting the environment from the negative impacts of land disturbance.

Where given, the *typical slope gradient* is drawn directly from the published DIPNR soil landscape handbooks.

Soil Hydrologic Group

Soil Hydrologic Group refers to the parameters used in calculating runoff coefficients for different textural soil groups (Appendix F). To arrive at individual groups we have reviewed each soil landscape looking specifically at the published K_{sat} and layer depth data together with layer arrangements illustrated in the schematic cross sections. *R*-factor maps (Appendix B) and depths derived from figure F1 have been used to estimate critical layer depths. Weighting of the results has been applied based on a professional

understanding of *in situ* landscape limitations where, probably, these would override the influence of sample-based laboratory measurements.

Acid sulfate risk

Acid sulfate risk has been derived directly from the frequency with which possible acid sulfate soil (PASS) indicators have appeared in DIPNR's samples of each landscape. The groupings correspond to the combined high and low PASS frequencies in the following way:

none	. . . . .	no PASS samples detected
sporadic	. . . . .	PASS indications in <20% of samples
common	. . . . .	PASS indications in 20-39% of samples
frequent	. . . . .	PASS indications in 40-59% of samples
widespread	. . . . .	PASS indications in 60-80% of samples
endemic	. . . . .	PASS indications in >80% of samples

Subsoil USCS and K-factor

Subsoil USCS and K-factor Data are transferred directly from the published DIPNR soil landscape handbooks.

Sediment type

Sediment type is a parameter to help in the design of sediment retention basins as described at Section 6.3.3. It is calculated from grading and dispersion data from the published DIPNR soil landscape handbooks

Sediment basin wall construction (earth)

Sediment basin wall construction (earth) Recommendations have been derived from the published DIPNR soil landscape handbooks based on information presented in Charman and Murphy (2000). While the recommendations can apply to most sediment basins, users should be aware that they are based on experience with farm dams in central and eastern New South Wales. Usually, these dams have capacities of less than 10,000 cubic metres and have top water levels less than three to four metres above the original ground surface at the upstream side of the wall. Charman and Murphy (2000) list other matters that users should consider.

The ratings are:

A. This soil is suitable for normal use. Take care to achieve good compaction, preferably with the soil in a moist condition. If the soil is too dry (cannot be moulded without breaking), reduce the layer thickness to less than 150 mm. The recommended minimum batter grades are 1:2.5 upstream and 1:2 downstream, except CH and MH classifications when they should be decreased to 1:3 and 1:2.5, respectively.

B. This material is similar to A, but with high compaction requirements to at least 85 percent of maximum dry density. To achieve this, the soil should be close to the optimum moisture content for the compaction plant, be placed in layers less than 150 mm thick and compacted with four complete passes of a crawler tractor or roller (or equivalent). As a general guide, the soil should be sufficiently moist to be made into a thread 10 mm thick, but not moist enough to be rolled thinner than 3 mm without breaking. The recommended minimum batter grades are 1:3 upstream and 1:2.5 downstream.

   Note: the following soils in groups C to J should be assessed in terms of:
   - zonal use
   - mixing with other local materials and/or ameliorants.

   An additional option is the importation of lining materials, such as a stable, impervious membrane or incorporating bentonite into it.

C. This is aggregated material that might not hold water. Compact to 95 percent of maximum with at least four passes of a sheepsfoot roller when the soil is slightly wet of optimum (can be rolled into a 3-mm diameter thread). Use a vibrating roller on dry soils. An ameliorant – STPP or sodium carbonate – could be required. If the EAT is Class 6 or the dispersion percentage is less than 10, then the dam is likely to leak unless sealed with better clay or treated with an ameliorant to induce dispersion. A permeameter test may be required.

D. This soil is highly susceptible to tunnelling or piping failure. It must be well compacted throughout to reduce permeability and saturation settlement. The soil should be compacted to at least 90 percent maximum dry density by ensuring adequate moisture content. If drier than optimum, gypsum or hydrated lime should be incorporated into the soil at rates based on laboratory testing – the method to be determined by site and equipment constraints. For additional stability, the structure should be designed to hold no more than 1 metre of water against the wall and batter grades should be decreased to 3.5:1 (H:V) upstream and 3:1 (H:V) downstream.

E. This soil is very susceptible to tunnelling or piping failure. In addition to Recommendation D, the structure must hold no more than 1 metre depth above the original ground surface at the upstream side of the wall and not be subject to more than 0.3 metres per day draw down (trickle pipes must not be more than 0.3 metres below top water level). Gypsum or hydrated lime should be incorporated in the upstream side of the wall. The recommended upstream batter grades should be decreased to 4:1 (H:V), following compaction to 95 percent of maximum dry density.

F. This soil is very susceptible to tunnelling or piping failure. Because of the high shrink-swell potential, the batter grades must be decreased. In addition to Recommendation D, the freeboard must be increased to at least 1 metre above the

surcharge level and hydrated lime or gypsum should be applied at rates determined in the laboratory. The batter grades should be decreased to 4:1 (H:V) upstream and 3:1 (H:V) downstream where compaction at 95 percent maximum dry density cannot be assured.

G. The high shrink-swell potential of this soil can result in cracks extending through the wall below top water level. To reduce this possibility, a compacted central core (at least 95 percent maximum compaction) must be obtained by constructing it when the soil is at near optimal soil moisture content. The freeboard must be increased to at least 1 metre above the surcharge level to prevent surface cracks extending below the waterline. The recommended batter grades are 3.5:1 (H:V) upstream and 3:1 (H:V) downstream. The structure must be designed to retain sufficient water to keep the wall moist and minimise crack development.

H. These soils are highly susceptible to failure and the recommendations in G are more critical to prevent failure. Compaction should be to 95 percent of maximum dry density at least, and batter grades further reduced.

I. These soils are pervious and not recommended for general use. However, they can be used in a zoned embankment or mixed with other materials. The recommended batter grades are 3:1 (H:V) upstream and 3:1 (H:V) downstream.

J. The use of these soils is not recommended.

K. Usually, these soils are unsuitable for use in construction.

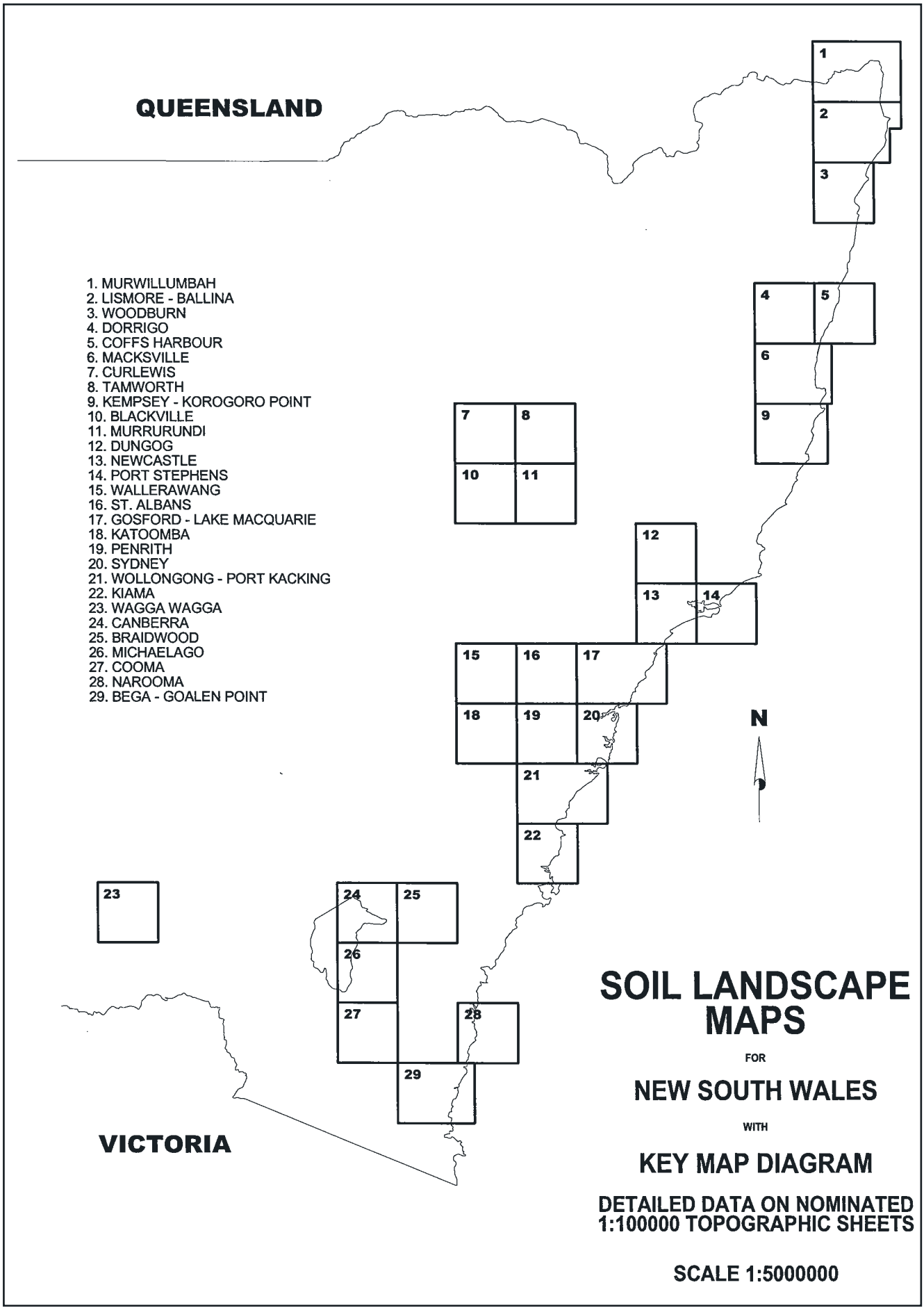

QUEENSLAND
1. MURWILLUMBAH
2. LISMORE - BALLINA
3. WOODBURN
4. DORRIGO
5. COFFS HARBOUR
6. MACKSVILLE
7. CURLEWIS
8. TAMWORTH
9. KEMPSEY - KOROGORO POINT
10. BLACKVILLE
11. MURRURUNDI
12. DUNGOG
13. NEWCASTLE
14. PORT STEPHENS
15. WALLERAWANG
16. ST. ALBANS
17. GOSFORD - LAKE MACQUARIE
18. KATOOMBA
19. PENRITH
20. SYDNEY
21. WOLLONGONG - PORT KACKING
22. KIAMA
23. WAGGA WAGGA
24. CANBERRA
25. BRAIDWOOD
26. MICHAELAGO
27. COOMA
28. NAROOMA
29. BEGA - GOALEN POINT
N
VICTORIA
SOIL LANDSCAPE MAPS
FOR
NEW SOUTH WALES
WITH
KEY MAP DIAGRAM
DETAILED DATA ON NOMINATED 1:100000 TOPOGRAPHIC SHEETS
SCALE 1:5000000

Table 1 Murwillumbah Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Angels Beach (ab)	Group A	1.50	sporadic	SP	0.010	*Type C*	I
				SP	0.014	*Type C*	I
Brays Creek (bc)		0.00	none	ML	0.036	*Type F*	A
	Group B			SM	0.025	*Type F*	I
				ML	0.042	*Type F*	J
Billinudgel (bi)		0.88	sporadic	OL	0.017	*Type F*	J
	Group C			ML	0.040	*Type D*	J
				CL	0.034	*Type D*	D
				CL	>0.085	*Type F*	C
Bald Mountain (bm)	Group C/D	0.00	none	ML	0.027	*Type F*	J
Burringbar (bu)	Group B/C	0.31	sporadic	OL	0.026	*Type D*	J
				CL	0.030	*Type D*	D
				CL	>0.081	*Type F*	C
	Group D			ML	0.041	*Type D*	B
	Group C			ML	0.048	*Type D*	B
				ML	0.054	*Type D*	D
				CL	>0.087	*Type F*	C
Byrrill (by)		0.00	none	CH	0.014	*Type D*	G
	Group B			ML	0.025	*Type D*	J
				CL	0.089	*Type F*	C
				CL	0.018	*Type D*	G
	Group D			OL	0.029	*Type D*	J
				CH	0.015	*Type F*	A
				CL	0.023	*Type D*	A
Carool (ca)	Group D	0.00	none	OL	Peaty	*Type F*	J
	Group C			OL	0.006	*Type F*	J
				CL	0.065	*Type F*	G
				CL	0.067	*Type F*	C
Cobaki (cb)		49.22	endemic	ML	>0.075	*Type F*	C
				CL	>0.089	*Type F*	G
	Groupo D			PT	Peaty	*Type F*	J
				OL	Peaty	*Type F*	J
Cudgera (cd)	Group C	11.63	frequent	ML	0.048	*Type D*	J
				ML	0.057	*Type D*	B
				ML	>0.089	*Type F*	C
				CL	>0.090	*Type F*	C
Crabbes Creek (cr)	Group B	0.32	sporadic	SC	0.038	*Type F*	B
				SC	0.032	*Type F*	B
				ML	0.034	*Type F*	A
				ML	0.036	*Type D*	A
				CL	0.025	*Type D*	A
Cudgen (cu)	Group C/D	0.68	sporadic	CL	0.006	*Type F*	K
				CL	0.015	*Type F*	C
Disputed Plain (dp)	Group D	0.00	none	CH	0.019	*Type F*	J
				CH	0.023	*Type D*	F
Frogs Hollow (fh)		0.00	none	CL	0.026	*Type D*	B
	Group C			OL	Peaty	*Type F*	J
				CL	0.024	*Type D*	A
				ML	0.036	*Type F*	J

Table 1 Murwillumbah Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
				CL	0.085	*Type F*	C
Georgica (ge)	Group C/D	0.00	none	CH	0.036	*Type D*	F
				ML	0.031	*Type F*	J
Green Pigeon (gp)	Group B/C	0.00	none	OL	0.001	*Type F*	J
				CH	0.065	*Type F*	C
				OL	0.009	*Type F*	J
				ML	0.038	*Type F*	A
Kingscliff (ki)	Group A/B	32.02	endemic	SP	0.009	*Type F*	J
				SP	0.016	*Type F*	J
				SP	0.009	*Type C*	I
				CL	0.024	*Type D*	G
Kunghur (ku)	Group C/D	0.00	none	SC	0.029	*Type F*	J
				CL	0.021	*Type F*	G
				CL	0.069	*Type F*	C
				CL	0.026	*Type D*	A
				CL	0.021	*Type D*	A
				SC	0.031	*Type D*	B
	Group D			SW	0.022	*Type F*	J
				SC	0.029	*Type F*	B
Limpinwood (li)	Group C	0.00	none	CL	0.030	*Type D*	J
				CL	0.028	*Type F*	J
				CH	0.032	*Type D*	H
	Group C/D			OL	0.009	*Type F*	J
				CL	0.064	*Type F*	C
	Group C			ML	0.049	*Type F*	A
	Group D			OL	0.020	*Type F*	J
				CH	0.057	*Type F*	G
				MH	0.071	*Type F*	K
Mebbin (me)	Group D	0.00	none	SM	Peaty	*Type F*	J
				ML	0.044	*Type F*	A
Mount Terragon (mt)		0.00	none	CL	0.069	*Type F*	C
				CL	0.050	*Type F*	C
	Group C			ML	0.045	*Type F*	C
				CL	0.027	*Type F*	A
				OL	0.009	*Type F*	J
				CL	0.022	*Type F*	A
				CL	0.069	*Type F*	G
	Group C/D			SM	0.033	*Type F*	J
				CL	0.034	*Type D*	G
Mount Warning (mw)	Group C	0.00	none	ML	0.022	*Type F*	J
				CL	0.062	*Type F*	C
	Group D			OL	0.009	*Type F*	J
				CL	0.023	*Type F*	J
Nobbys Creek (no)	Group D	0.24	sporadic	ML	0.034	*Type F*	A
				ML	0.045	*Type F*	A
				ML	0.041	*Type F*	J
				ML	0.044	*Type F*	C
				SP	0.011	*Type C*	J
Nullum (nu)	Group B	0.00	none	OL	0.017	*Type F*	J
				ML	0.054	*Type F*	I
				CL	0.041	*Type D*	B

Table 1 Murwillumbah Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	Group D			SM-ML	0.017	*Type F*	J
				CL	0.042	*Type F*	B
Ophir Glen (og)	Group C/D	10.23	common	PT	Peaty	*Type F*	J
				ML	0.040	*Type D*	A
				OL	0.035	*Type D*	J
				CL	0.018	*Type F*	A
				ML	0.027	*Type D*	J
				CL	0.019	*Type D*	A
				ML	>0.066	*Type D*	J
				ML	0.040	*Type D*	A
Oxley (ox)	Group B/C	0.39	sporadic	ML	0.049	*Type F*	A
Pottsville (po)	Group B	13.39	endemic	CL	0.029	*Type F*	J
				SP	0.015	*Type F*	I
				SP	Pan	*Type F*	I
Pumpenbill (pu)	Group B	0.00	none	ML	0.029	*Type F*	J
				CL	0.047	*Type F*	G
				CL	0.019	*Type F*	C
				OL	0.014	*Type F*	J
				CL	0.055	*Type F*	C
Rous (ru)	Group B	0.02	sporadic	ML	0.037	*Type F*	J
				SC	0.036	*Type F*	I
				SM	0.034	*Type F*	B&I
				CL	0.036	*Type F*	B
Tweed (tw)	Group C/D	88.07	endemic	ML	0.025	*Type F*	J
				SC	0.022	*Type F*	C
				OL	Peaty	*Type F*	J
				ML	0.050	*Type F*	A
				MH	0.048	*Type F*	A
				MH	0.030	*Type D*	B
				CL	0.041	*Type D*	E
				CH	0.035	*Type D*	J
				CH	0.039	*Type D*	G
Ukerabagh (uk)	inapplicable	96.12	endemic	ML	0.047	*Type D*	J
				CL	0.048	*Type D*	D
				OL	0.028	*Type F*	J
				PT	Peaty	*Type F*	J
				SP	0.025	*Type F*	J
Wollumbin (wl)	Group C	0.00	none	PT	Peaty	*Type F*	J
				ML	0.027	*Type D*	A
				CL	0.025	*Type F*	A
				CL	>0.089	*Type F*	C
Wooyung (wy)	Group A	0.80	endemic	SP	0.013	*Type F*	J
				SP	0.000	*Type C*	I
				SP	0.010	*Type C*	I
				SP	0.013	*Type F*	I

Table 2 Lismore-Ballina Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Angels Beach (ab)	non cohesive dune materials; high wind and wave erosion hazards; waterlogging in some low areas; widespread risk to foundations	20 to 50	Group A	sporadic	SW	0.014	*Type F*	I
					SW	0.002	*Type C*	I
					SP	0.000	*Type C*	I
Bagotville (ba)	steep slopes and shallow soils, localised rock outcrop; localised mass movement and rock fall hazards; waterlogging and flooding in some low areas; localised non cohesive soils; localised risks to foundations	10 to 30	Group C/D	sporadic	SM	0.025	*Type F*	J
					CL	0.005	*Type F*	J
			Group B/C		CL	0.031	*Type D*	D
					CL-CH	0.016	*Type D*	A
Bangalow (bg)	generally steep slopes; widespread mass movement hazard; localised shallow soils upslope and waterlogging in low areas; localised risks to foundations	15 to 25	Group C	sporadic	MH	0.011	*Type F*	C
					MH-CH	0.011	*Type F*	C
Billinudgel (bi)	generally shallow soils; some localised steep slopes subject to mass movement	10 to 20+	Group C	sporadic	ML-MH	0.019	*Type F*	J
					CL	0.028	*Type F*	B
					CL	0.022	*Type D*	B
					CL	0.037	*Type D*	D
Burns Point (bp)	widespread waterlogging and flood hazard areas; localised risk of wave erosion; widespread risks to foundations	<2	Group D	endemic	SW	0.005	*Type C*	I
					ML	Peaty	*Type D*	K
					SM	0.013	*Type F*	B&I
					CL	0.034	*Type D*	A
Black Rock (br)	widespread non cohesive soils subject to wind erosion; permanently high watertables in low areas; localised risks to foundations	<5	Group A	endemic	SM	0.000	*Type C*	J
					SM	0.004	*Type C*	I
			Group D		PT	Peaty	*Type F*	J
Burringbar (bu)	generally steep slopes; widespread mass movement hazard; localised shallow soils upslope; widespread risks to founda_tions	15 to 33+	Group B	sporadic	CL	0.028	*Type F*	B
					ML-CL	0.035	*Type F*	D
					CL	0.034	*Type D*	D
Coffee Camp (cc)	localised steep slopes with general risk of mass movement and localised rock falls; shallow soils, and rock outcrop upslope; localised non cohesive soils; widespread risk to foundations	10 to 20	Group A	sporadic	SC	0.012	*Type F*	C
					CL	0.062	*Type F*	C
					SM	0.016	*Type F*	J
					CL-CH	0.023	*Type F*	G
Coraki (ck)	generally non cohesive soils; seasonal waterlogging in some low areas	2 to 10	Group A/B	sporadic	ML	0.016	*Type F*	I
					ML	0.024	*Type F*	A
					CH	0.010	*Type F*	G
Calico (cl)	generally steep slopes; widespread mass movement hazard;	10 to 25	Group C	none	CL	0.040	*Type D*	J

Table 2 Lismore-Ballina Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	generally high erosion hazard; localised shallow soils upslope and waterlogging in low areas; widespread risks to foundations				CH	0.024	*Type F*	G
					CL-CH	0.021	*Type F*	C
					CL-CH	0.012	*Type F*	C
					CL	0.017	*Type F*	J
					CL	0.029	*Type F*	A
Coolamon (co)	generally steep slopes, widespread risk of mass movement; shallow soils, and rock outcrop upslope; localised non cohesive soils; widespread risk to foundations	20 to 60	Group C	sporadic	MH	0.011	*Type F*	C
					MH-CH	0.011	*Type F*	C
Disputed Plain (dp)	permanently high watertables; localised waterlogging in some low areas; widespread risk to foundations	1 to 3	Group C/D	sporadic	CH	0.010	*Type D*	H
					CH	0.009	*Type D*	H
Dungarubba (du)	permanently high watertables; widespread waterlogging and flooding in low areas; widespread risk to foundations	<1	Group C/D	endemic	MH	Peaty	*Type F*	A
					MH	Peaty	*Type F*	C
East Ballina (eb)	generally non cohesive soils subject to wind erosion; seasonal waterlogging in lower areas	3 to 10	Group A	sporadic	SP	0.003	*Type C*	J
					SP	0.001	*Type C*	nt
Eltham (el)	widespread water erosion and flooding hazards; localised mass movement; widespread risks to foundations	<2	Group C	none	CL	0.029	*Type F*	J
					CL	0.045	*Type F*	C
Empire Vale (ep)	generally high watertables; widespread flooding hazard; widespread risks to foundations	<1	Group C/D	endemic	MH-CH	0.023	*Type F*	H
					CH	0.050	*Type D*	D
					CL	0.029	*Type D*	J
					CH	0.043	*Type D*	D
Ewingsdale (ew)	localised rock outcrop and mass movement; waterlogging in some low areas	3 to 10	Group C	sporadic	MH	0.033	*Type F*	C
					CL	0.029	*Type F*	G
Frederick (fr)	generally shallow soils and localised rock outcrop; wide_spread waterlogging; localised risks to foundations		Group C/D	none	CL	0.030	*Type F*	B
					CH	0.013	*Type D*	G
Georgica (ge)	generally steep slopes, localised shallow soils; widespread mass movement, localised rock falls; some seasonal waterlogging in low areas; widespread risk to foundations	15 to 30	Group B	none	CL-CH	0.016	*Type F*	K/H
					CH	0.045	*Type D*	H
					ML	0.052	*Type D*	B
					CL	0.024	*Type F*	B
					CL	0.033	*Type F*	A

Table 2 Lismore-Ballina Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Leycester (le)	widespread water erosion and flooding hazards; localised mass movement; widespread risks to foundations	<2	Group C	common	CL-CH	0.036	*Type F*	B/A
					CL-CH	0.049	*Type F*	G
Mackellar (ma)	generally steep slopes, widespread risk of mass movement; shallow soils, and rock outcrop upslope; widespread risk to foundations	<50	Group C	none	CL-CH	0.038	*Type F*	B/A
					CL-CH	0.044	*Type F*	B/A
					CL-CH	0.064	*Type F*	B/A
Mount Burrel (mb)	generally steep slopes and rock outcrop, localised shallow soils; widespread mass movement and rock falls; some seasonal waterlogging in low areas; widespread risk to foundations	20 to 50	Group C/D	none	CL	0.009	*Type F*	J
					CL	0.016	*Type F*	G
			Group C		CL	0.016	*Type F*	G
					MH-CH	0.005	*Type D*	H
McKee (mc)	generally shallow soils; localised steep slops widespread mass movement; seasonal waterlogging in some low areas; localised risks to foundations	<10		sporadic	CH	0.009	*Type F*	H
			Group C		SC-CL	0.025	*Type F*	C
Minyon (mi)	localised steep slopes; shallow soils and rock outcrop upslope; seasonal waterlogging in some low areas	10 to 15	Group C	none	ML-CL	0.014	*Type F*	D
					ML-CL	0.021	*Type F*	D
					ML-CL	0.045	*Type F*	B
			Group D		CL	0.026	*Type F*	D
Mullumbimby (mu)	widespread seasonal waterlogging and localised flooding hazard in low areas	<1	Group B/C	frequent	MH-CH	0.020	*Type F*	C
			Group C		MH	Peaty	*Type F*	C
					MH	0.029	*Type F*	A
Myocum (my)	generally high watertables and widespread waterlogging; localised flood hazards; widespread risks to foundations	<2	Group C	frequent	CL-CH	0.000	*Type F*	G/C
					CL-CH	0.000	*Type F*	H
Nammoona (na)	generally high water erosion hazards; localised steep slopes, shallow soils; some localised mass movement	10 to 18		none	CL	0.082	*Type F*	D
			Group C		ML	0.048	*Type F*	J
					CH	0.011	*Type F*	J
			Group B		CH-MH	0.013	*Type F*	J
North Casino (nc)	generally high watertables and widespread waterlogging; general flooding hazard; widespread risks to foundations	<2	Group D	common	CH	0.016	*Type D*	H
Nightcap (ni)	generally steep slopes and shallow soils; widespread mass movement; widespread risks to foundations	20 to 50+	Group B/C	none	MH	0.016	*Type F*	C
					CH	0.023	*Type F*	C
					CL	0.031	*Type F*	J

Table 2 Lismore-Ballina Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Rosebank (ro)	generally steep slopes widespread mass movement hazard; localised shallow soils upslope; waterlogging in some low areas; localised rock outcrop; widespread risks to foundations	20 to 40	Group C	none	MH	0.018	*Type F*	C
					MH-CH	0.040	*Type F*	C
Sandy Creek (sc)	widespread water erosion hazard; permanently high watertables, widespread waterlogging and localised flooding in low areas;	<5	Group B	common	SM	0.054	*Type F*	nt
					CL	0.033	*Type D*	B
					CL	0.047	*Type F*	B
					ML-CL	0.027	*Type D*	D
					CL-CH	>0.085	*Type F*	G/C
Tatham (ta)	generally high watertables, localised flooding and widespread seasonal waterlogging; widespread risks to foundations	<5	Group C/D	sporadic	CL	0.046	*Type F*	B
					CL-OH	Peaty	*Type F*	J
					CH	0.016	*Type F*	H
					CH	0.005	*Type D*	D
Terania (te)	widespread water erosion hazards; seasonal waterlogging and flooding of low areas; localised mass movement; localised risks to foundations	<3	Group C	none	CL	0.038	*Type F*	C
					CL	0.046	*Type F*	B
Tuckean (tu)	generally high watertables; general flooding hazard; widespread risks to foundations	<1	Group D	endemic	SM	Peaty	*Type F*	J
					OL	Peaty	*Type F*	J
					CL	0.026	*Type F*	C
Tyagarah (ty)	generally high watertables; widespread waterlogging; general risk of wind erosion; localised risks to foundations	<1	Group C/D	endemic	SM	0.000	*Type F*	J
					SM	0.020	*Type F*	J
					ML	0.020	*Type D*	A
Wollongbar (wo)	localised mass movement hazards	3 to 15	Group B	sporadic	CL-CH	0.007	*Type F*	C
					CL-CH	0.059	*Type F*	C
Yorklea (yo)	generally high water erosion hazards; seasonal waterlogging and localised flooding in low areas; localised shallow soils upslope	2 to 10	Group C/D	sporadic	ML	0.053	*Type F*	B
					CL	0.024	*Type D*	A
					CH	0.013	*Type D*	A
					CL	0.051	*Type D*	A

Table C3. Woodburn Soil Landscapes

Table 3 Woodburn Soil Landscpes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS Class	K-factor USLE (t.ha.h/ha. MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Angels Beach (ab)	Group A	0.02	sporadic	1.42	SM	0.016	*Type F*	J
					SM	0.014	*Type F*	J
					SM	0.007	*Type C*	J
	Group A				SM	0.009	*Type F*	J
					SM	0.002	*Type C*	I
Angourie (an)	inapplicable	0.15	common	29.46	SM	Peaty	*Type F*	J
					SM	0.011	*Type C*	J
					SP-SM	0.000	*Type C*	J
	Group B/C				SP-OL	0.016	*Type C*	J
					SP-SM	0.000	*Type C*	J
					PT	Peaty	*Type F*	J
					PT	Peaty	*Type F*	J
The Broadwater (bd)		99.74	endemic	0.00	ML	0.061	*Type D*	B
					SM-ML	0.056	*Type F*	B&I/A
					ML	>0.087	*Type F*	C
Bundjalung (bj)	inapplicable	2.18	common	27.46	SM	Peaty	*Type C*	J
					SP-SM	0.000	*Type C*	J
					OL	0.031	*Type F*	J
					CL	0.029	*Type F*	J
					SC-CL	0.019	*Type F*	J
					SM	0.023	*Type F*	I
					SM	0.000	*Type C*	I
Bungawalbin (bw)	inapplicable	18.66	widespread	57.16	PT	Peat	*Type F*	J
					OL	0.024	*Type D*	J
					CH	0.018	*Type D*	H
					CH	0.016	*Type D*	H
	Group C/D				SM	0.026	*Type F*	I
					SM	0.029	*Type F*	B&I
					SC	0.036	*Type F*	C
					SC	0.038	*Type F*	C
	Group B				SM	0.032	*Type F*	J
					SM	0.030	*Type F*	J
					SM	0.026	*Type F*	nt
					SP-ML	0.051	*Type F*	I
					CL	0.044	*Type F*	G
	Group B/C				OL	0.037	*Type F*	J
					MH	0.038	*Type F*	J
					CH	0.025	*Type D*	A
					CH	0.021	*Type D*	G
					ML	0.049	*Type F*	A
	Group C/D				OL	>0.028	*Type F*	J
					ML	>0.059	*Type D*	D
					ML	0.034	*Type D*	A
					CL	0.027	*Type D*	G

Table 3 Woodburn Soil Landscpes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS Class	K-factor USLE (t.ha.h/ha. MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Cahills Road (ch	Group C	0.15	sporadic	0.01	OL	0.027	*Type F*	J
					CH	0.020	*Type D*	G
					ML	0.039	*Type F*	A
					CH	0.033	*Type D*	G
					CL	0.051	*Type D*	D
	Group C/D				SM	0.028	*Type F*	J
					SC	0.032	*Type F*	B
					CL	0.014	*Type D*	A
					CL	0.026	*Type D*	A
	Group D				SM	0.049	*Type F*	J
					SM	0.056	*Type F*	J
					CL	0.031	*Type D*	B
					CL	0.035	*Type D*	B
	Group C/D				SM	0.012	*Type F*	J
					CL	0.014	*Type F*	A
					CL	0.017	*Type F*	A
					SC-CL	0.024	*Type F*	B/A
	Group C				ML	0.032	*Type F*	A
					CL	0.024	*Type D*	G
Coraki (ck)	Group B	1.95	sporadic	0.48	SM	0.016	*Type F*	I
					SM	0.024	*Type F*	I
					GM	0.026	*Type C*	I
					SM	0.051	*Type F*	I
	Group B				SM	0.015	*Type F*	J
					SM	0.019	*Type F*	I
					SM	0.025	*Type F*	I
	Group B				SM	0.019	*Type F*	J
					SM	0.021	*Type F*	I
					SM	Pan	*Type F*	I
Cowper (cw)	Group B	99.39	endemic	0.00	ML	0.048	*Type F*	J
					ML	0.048	*Type F*	J
					SM	0.052	*Type F*	I
	Group C/D				ML	0.050	*Type D*	J
					ML	0.053	*Type D*	A
Cliff Road (cx)	Group C/D	0.17	sporadic	0.03	SM	0.034	*Type D*	J
					SM	0.042	*Type F*	J
					SC	0.028	*Type D*	B
	Group D				SM	0.000	*Type C*	I
					SM	0.003	*Type C*	I
	Group C/D				SM	0.003	*Type C*	J
					SM	0.011	*Type C*	I
					SM	0.017	*Type C*	I
					SC	0.019	*Type F*	B
	Group D				SM	0.017	*Type F*	J

Table 3 Woodburn Soil Landscpes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS Class	K-factor USLE (t.ha.h/ha. MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					SM	0.023	*Type F*	I
					ML	0.026	*Type D*	B
					CL	0.027	*Type D*	B
Dungarubba (du)	Group D	88.69	endemic	8.11	PT	Peaty	*Type F*	J
					CL	0.027	*Type F*	J
					CL	>0.089	*Type F*	C
					ML	0.055	*Type F*	J
					CL	0.036	*Type D*	B
					CL	0.036	*Type F*	B
	Group C				PT	Peaty	*Type F*	J
					PT	Peaty	*Type F*	J
					OL	Peaty	*Type D*	J
Devils Pulpit (dv)	Group D	0.13	sporadic	0.00	SM	0.009	*Type C*	J
					SM	0.010	*Type C*	J
					SM	0.008	*Type C*	J
					SM	0.017	*Type F*	J
					SM	0.026	*Type F*	J
					CL	0.041	*Type D*	D
					SM	0.021	*Type F*	J
					SM	0.036	*Type F*	J
					SM	0.049	*Type F*	J
					CL	0.046	*Type D*	D
Ellangowan (eg)	Group A/B	0.05	sporadic	0.07	SM	0.017	*Type F*	J
					SM	0.037	*Type F*	I
					SC	0.025	*Type F*	B
	Group B/C				SM	0.044	*Type F*	J
					SM	0.047	*Type F*	J
					ML	0.076	*Type F*	C
	Group D				OL	Peaty	*Type F*	J
					ML	0.047	*Type D*	B
					CL	0.040	*Type F*	B
					CL	>0.091	*Type F*	C
	Group C				SM	0.027	*Type F*	J
					SM	0.049	*Type F*	J
					CL	0.024	*Type F*	G
					CH	0.020	*Type D*	A
	Group B/C				OL	0.019	*Type F*	J
					MH	0.040	*Type D*	E
					CL	0.031	*Type D*	D
					SP-CL	0.015	*Type F*	K/G
Evans River (er)	Group C	54.80	endemic	40.94	SP-OL	0.020	*Type F*	J
					ML	0.033	*Type F*	C
					SM	0.043	*Type F*	I
					SC	0.038	*Type F*	C

Table 3 Woodburn Soil Landscpes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS Class	K-factor USLE (t.ha.h/ha. MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					SC	0.037	*Type F*	C
	inapplicable				OL	0.031	*Type D*	J
					OL	0.022	*Type D*	J
					SC	0.029	*Type F*	C
					SC	0.021	*Type C*	I
Everlasting (ev)	Group C/D	87.92	endemic	8.65	CL	>0.064	*Type F*	G
					ML	0.055	*Type F*	C
					CH	0.027	*Type F*	C
					CH	0.037	*Type F*	C
					CH	0.032	*Type F*	C
					PT	Peaty	*dp% not*	J
	inapplicable				PT	Peaty	*Type F*	J
					ML	>0.077	*Type F*	C
					ML	>0.088	*Type F*	C
					ML	>0.084	*Type F*	C
					ML	>0.072	*Type F*	nt
Gibberagee (gi)	Group D	0.00	none	0.00	SM	0.046	*Type F*	J
					SM	0.043	*Type F*	I
					CH	0.021	*Type D*	H
					CH	0.022	*Type D*	F
					SC	0.027	*Type D*	B
	Group C/D				SM	0.048	*Type F*	J
					SM	0.050	*Type F*	J
					CH	0.022	*Type F*	H
					CH	0.029	*Type D*	H
					CL	0.030	*Type D*	G
	Group D				SM	0.040	*Type F*	J
					SM	0.012	*Type F*	J
					SC	0.023	*Type F*	B
					SC	0.031	*Type D*	B
Gulmarrad (gu)	Group C	0.47	sporadic	0.63	SM	0.041	*Type F*	J
					SM	0.040	*Type F*	J
					CL	0.023	*Type F*	H
					ML	0.058	*Type F*	J
					CL	0.041	*Type F*	B
					CL	0.024	*Type F*	A
					CH	>0.094	*Type F*	C
					CL	0.023	*Type D*	B
					CL	0.043	*Type F*	C
	Group C/D				OL	0.015	*Type F*	J
					ML	0.031	*Type F*	A
					ML	0.047	*Type F*	A
	Group B/C				SM	0.014	*Type F*	J
					SC	0.008	*Type F*	J
					CH	0.018	*Type D*	B

Table C3. Woodburn Soil Landscapes (continued)

Table 3 Woodburn Soil Landscpes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS Class	K-factor USLE (t.ha.h/ha. MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					CL	0.026	*Type D*	B
	Group C				OL	Peaty	*Type F*	J
					OL	0.024	*Type F*	J
					CH	0.020	*Type D*	A
					CH	>0.080	*Type F*	C
					CH	>0.086	*Type F*	C
	Group D				PT	Peaty	*Type F*	J
					ML	0.049	*Type D*	J
					CL	0.030	*Type D*	A
					CL	0.024	*Type D*	A
					CL	>0.091	*Type F*	C
	Group C/D				OL	0.028	*Type F*	J
					SM	0.020	*Type D*	J
					SM	0.024	*Type F*	B&I
	Group D				ML	0.075	*Type D*	J
					ML	0.059	*Type F*	I
					CH	0.031	*Type F*	G
					CH	0.028	*Type D*	B
	Group B/C				SM	0.032	*Type F*	J
					SM	0.038	*Type F*	I
					SC	0.028	*Type F*	B
					SC-CL	0.024	*Type F*	G
	Group C				SM	0.007	*Type C*	J
					SM	0.043	*Type F*	J
					SM	0.042	*Type F*	J
					SM	0.034	*Type D*	J
	Group C/D				ML	0.032	*Type F*	A
					CL	0.047	*Type F*	C
					ML	0.048	*Type F*	J
					CL	0.041	*Type F*	B
					CL	0.034	*Type D*	A
Iluka (il)	Group B	9.70	endemic	71.67	SM	0.011	*Type F*	J
					SM	0.005	*Type F*	J
					SM	0.017	*Type F*	I
					SM	0.009	*Type C*	I
	Group A				SC	0.040	*Type F*	J
					SM	0.048	*Type F*	I
					SM	0.052	*Type F*	I
					SP-SM	0.001	*Type C*	J
					SP-SM	0.002	*Type C*	J
					SM	0.003	*Type C*	nt
Jerusalem Creek (je)	Group B	3.58	frequent	66.36	SC	Peaty	*Type F*	J
					SC	0.019	*Type C*	J
					SP-SM	0.000	*Type C*	I
	Group B/C				SM	0.003	*Type C*	I
					OL	0.018	*Type F*	J

Table C3. Woodburn Soil Landscapes (continued)

Table 3 Woodburn Soil Landscpes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS Class	K-factor USLE (t.ha.h/ha. MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					PT	Peaty	*Type F*	J
Kooyong (ky)	Group C/D	0.06	sporadic	0.02	SM	0.032	*Type F*	J
					SM	0.039	*Type F*	J
					SC	0.024	*Type F*	B
	Group D				SM	0.010	*Type F*	J
					SM	0.013	*Type F*	J
	Group C/D				SM	0.012	*Type F*	J
					SM	0.034	*Type F*	J
					SC-CL	0.016	*Type F*	B/A
					SC	0.018	*Type F*	B
					SM	0.006	*Type C*	J
					SM	0.013	*Type C*	I
					SM	0.011	*Type C*	I
Lawrence (la)	Group B/C	1.77	sporadic	0.83	ML	0.045	*Type F*	J
					ML	0.059	*Type F*	I
					CL	0.033	*Type D*	E
					CL	0.038	*Type D*	D
	Group C/D				ML	0.028	*Type D*	J
					CL	0.016	*Type F*	A
					CL	0.022	*Type D*	B
					CL	0.023	*Type D*	B
	Group B				OL	0.025	*Type F*	J
					ML	0.060	*Type D*	D
					CH	0.034	*Type D*	G
					CH	0.034	*Type D*	G
					ML	0.033	*Type F*	C
					CL	>0.088	*Type F*	G
					CL	0.060	*Type F*	G
Lockleys Road (lo)	Group A	0.47	sporadic	0.11	SM	0.009	*Type C*	J
					SM	0.009	*Type C*	J
					SM	0.014	*Type F*	J
					SM	0.038	*Type F*	B&I
	Group B				SM	0.027	*Type F*	J
					SM	0.038	*Type F*	J
					SM	0.039	*Type F*	J
					SM	0.039	*Type F*	J
					SC	0.035	*Type D*	I
	Group A				SM	0.013	*Type C*	J
					SM	0.013	*Type C*	J
					SM	0.031	*Type F*	J
					SM	0.009	*Type F*	J
					SM	0.017	*Type F*	I
					SM	Pan	*Type F*	I
					SM	Pan	*Type F*	I
					SM	Pan	*Type F*	I

Table 3 Woodburn Soil Landscpes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS Class	K-factor USLE (t.ha.h/ha. MJ.mm)	Sediment type	Sediment basin wall construction (earth)
	Group B				SM	0.014	*Type F*	J
					SP-ML	0.018	*Type F*	J
					SM	0.015	*Type F*	J
					SC	0.031	*Type F*	B
McKee (mc	Group B	0.00	none	0.00	ML	0.053	*Type F*	J
					CL	0.035	*Type F*	J
					CL	0.041	*Type F*	H
					CL	0.021	*Type F*	H
					SP-ML	0.048	*Type F*	I/A
	Group C/D				OL	Peaty	*Type F*	J
					MH	0.044	*Type F*	J
					CH	0.019	*Type D*	H
					CH	0.029	*Type F*	H
					MH	0.039	*Type F*	B
New Italy (ne)	Group D	1.28	sporadic	0.89	OL	0.028	*Type D*	J
					ML	0.052	*Type D*	B
					CL	>0.080	*Type F*	G
					CL	>0.082	*Type F*	G
					CL	>0.096	*Type F*	G
	Group C/D				OL	0.037	*Type D*	J
					ML	0.065	*Type D*	nt
					CL	0.029	*Type D*	A
					CL	0.027	*Type D*	G
	Group B				SM	0.025	*Type F*	J
					SM	0.031	*Type F*	J
					SM	0.042	*Type F*	J
					SM	0.045	*Type F*	J
	Group A				ML	0.015	*Type D*	J
					ML	0.021	*Type D*	A
					CL	0.014	*Type D*	B
					CH	0.009	*Type D*	A
					CH	0.033	*Type F*	G
Olive Gap (ol)	Group C/D	0.26	sporadic	0.77	OL	Peaty	*Type F*	J
					SP-ML	0.054	*Type F*	J
					CL	0.031	*Type F*	A
					CL	0.038	*Type D*	B
	Group C				SM	0.020	*Type F*	J
					SM	0.033	*Type F*	J
					CL	0.026	*Type F*	A
					CL	0.027	*Type F*	A
	Group C/D				SM	0.040	*Type F*	J
					SM	0.047	*Type F*	J
					SC	0.035	*Type D*	B
	Group D				SM	0.033	*Type F*	J
					SM	0.035	*Type F*	J

Table 3 Woodburn Soil Landscpes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS Class	K-factor USLE (t.ha.h/ha. MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					SM	0.037	*Type F*	J
					SP-CL	0.026	*Type D*	J/B
					CL	0.038	*Type F*	A
	Group C/D				SM	0.028	*Type F*	J
					SM	0.043	*Type F*	J
					SP-CH	0.022	*Type D*	I/A
					SC	0.035	*Type D*	B
Palmers Island (pa)	Group C/D	99.13	endemic	0.16	CL	0.036	*Type D*	J
					CL	0.043	*Type D*	B
					ML	0.054	*Type D*	B
					ML	0.066	*Type D*	D
					ML	0.071	*Type F*	I
					ML	0.067	*Type F*	A
Physics Lagoon (pl)	Group C	0.00	none	0.00	ML	Peaty	*Type F*	J
					ML	0.037	*Type F*	J
					SM	0.047	*Type F*	J
	Group C/D				PT	Peaty	*Type F*	J
					CL	0.033	*Type D*	B
					CL	0.026	*Type D*	B
					CL	0.022	*Type D*	B
	Group C/D				PT	Peaty	*Type F*	J
					OL	Peaty	*Type D*	J
					CH	0.020	*Type D*	G
	Group B				SP-SM	0.000	*Type C*	J
					SP-SM	0.000	*Type C*	J
					SM	0.000	*Type C*	J
					SP-SM	0.000	*Type C*	J
	Group B/C				SM	0.025	*Type F*	J
					SM	0.037	*Type F*	nt
					SC-CL	0.023	*Type F*	nt
					CL	0.027	*Type D*	nt
Pretty Plain (pp)	Group D	0.23	sporadic	9.66	ML	>0.064	*Type D*	J
					ML	0.074	*Type D*	E
					CL	>0.093	*Type F*	C
	Group B				SC	0.029	*Type F*	J
					MH	0.042	*Type D*	B
					CL	0.084	*Type F*	C
					SC	0.071	*Type F*	C
	Group D				SM	0.041	*Type F*	J
					SM	0.042	*Type F*	J
					SC	0.046	*Type F*	B
	Group B				SM	0.025	*Type F*	J
					SC	0.029	*Type F*	B
					SM	0.038	*Type F*	J

Table C3. Woodburn Soil Landscapes (continued)

Table 3 Woodburn Soil Landscpes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS Class	K-factor USLE (t.ha.h/ha. MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					CL	0.041	*Type F*	A
Romiaka (rm)	Group D	92.62	endemic	5.92	OL	0.025	*Type D*	J
					CL	0.039	*Type F*	B
					SM	0.040	*Type F*	I
	Group B				PT	Peaty	*Type D*	J
					CL	>0.073	*Type F*	J
					SC	0.015	*Type F*	I
					SC	0.034	*Type F*	I
					SC	0.010	*Type C*	J
					SM	0.008	*Type C*	I
					SM	0.021	*Type C*	I
					SC	0.032	*Type C*	I
					SC	0.025	*Type F*	I
					SC	0.034	*Type F*	I
					SP-SC	0.002	*Type C*	I
					SC	0.010	*Type C*	I
South Evans Head (se)		1.51	sporadic	11.61	PT	Peaty	*Not tested*	J
	Group D				PT	Peaty	*Type F*	J
	Group B				SM	Peaty	*Type F*	J
					SM	0.009	*Type F*	J
	Group C/D				PT	Peaty	*Type F*	J
					PT	Peaty	*Type F*	J
					ML	0.014	*Type F*	C
					CH	0.019	*Type F*	H
Sportsmans Creek (sp)	Group C/D	10.71	common	25.19	SM	0.032	*Type F*	J
					SP-CL	0.019	*Type F*	I/A
					SC	0.021	*Type F*	B
	Group B				SM	0.010	*Type C*	J
					SM	0.013	*Type C*	I
					SM	0.013	*Type C*	I
					SM	0.012	*Type C*	I
Tabbimoble (tm)	Group C/D	0.00	sporadic	3.19	PT	Peaty	*Type F*	J
					CL	0.029	*Type D*	A
					CL	0.036	*Type D*	A
					OL	>0.052	*Type F*	J
					ML	>0.071	*Type D*	B
					CL	0.047	*Type D*	D
					CL	0.038	*Type D*	E
					CL	0.033	*Type D*	E
	Group C/D				OL	0.031	*Type F*	J
					ML	0.047	*Type F*	J
					ML	0.064	*Type D*	B
					CL	0.042	*Type D*	D

Table 3 Woodburn Soil Landscpes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS Class	K-factor USLE (t.ha.h/ha. MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					CL	>0.095	*Type F*	C
					CL	0.089	*Type F*	C
					CL	0.025	*Type D*	B
					CH	0.017	*Type D*	H
					CH	0.018	*Type F*	H
	Group D				PT	Peaty	*Type D*	J
					CL	0.031	*Type D*	J
					CL	0.033	*Type D*	B
					CL	0.037	*Type D*	B
Weapons Range (wr)	Group A	0.39	sporadic	1.19	SM	0.004	*Type C*	I
					SM	0.007	*Type C*	I
					SP-SM	0.000	*Type C*	J
					SP-SM	0.000	*Type C*	J
					SP-SM	0.000	*Type C*	I
					SP-SM	0.000	*Type C*	J
					SM	0.002	*Type C*	I
					SM	0.017	*Type F*	J
					SM	0.007	*Type C*	I
					SP-SM	0.000	*Type C*	I
					SP-SM	0.000	*Type C*	I
					SP-SM	Pan	*Type C*	I
Disturbed Terrain (xx)	Group D	17.57	common	2.49	SM	0.002	*Type C*	J
					ML	0.062	*Type F*	J
					ML	0.066	*Type F*	E
					SP-ML	0.065	*Type F*	D

Table 4 Dorrigo Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Arthurs Gap (ag)		none	SM-SC	0.010	*Type F*	I
			CL	0.018	*Type D*	B
			SC	0.040	*Type F*	B
Averys Creek (av)	Group C	none	OL	0.030	*Type F*	J
			ML	>0.094	*Type F*	C
			OL	0.032	*Type F*	J
			ML	0.053	*Type D*	B
			CL	>0.093	*Type F*	C
			CL	0.083	*Type F*	C
Bagawa (bw)	Group C/D	none	SW	0.014	*Type F*	J
			CL	0.030	*Type D*	B
			SC	0.025	*Type F*	B
			SC	0.032	*Type F*	B
			SC	0.023	*Type F*	C
Bellinger (be)	Group B	sporadic	ML	0.052	*Type F*	A
			ML	0.058	*Type F*	J
			ML	0.061	*Type F*	A
			ML	0.052	*Type F*	B
			ML	0.047	*Type F*	I
			OL	0.028	*Type F*	J
			ML-CL	0.050	*Type F*	B
			SM	0.027	*Type F*	I
Bielsdown (bi)	Group C	none	OL	0.023	*Type F*	J
			CL	0.058	*Type F*	C
			PT	Peaty	*Type F*	J
			ML-CL	0.032	*Type F*	C
Bostobrick (bk)	Group D	none	SC-CL	0.020	*Type F*	B/A
			SC	0.027	*Type F*	J
			CL	0.024	*Type F*	A
			OL	0.025	*Type F*	J
			SC	0.023	*Type F*	B
Black Mountain (bm)	Group B	none	ML	>0.056	*Type D*	B
			ML	0.052	*Type D*	B
			ML-CL	0.048	*Type F*	B
			ML	0.044	*Type F*	A
			ML	0.062	*Type F*	A
			ML-CL	0.047	*Type D*	D
Bobo (bo)	Group C/D	none	OL	Peaty	*Type F*	J
			SC	0.025	*Type F*	B
			CL	0.031	*Type D*	A
			ML	0.041	*Type D*	D
Bakers Plain (bp)	Group B/C	none	SC	0.031	*Type F*	B
			SC	0.018	*Type F*	C
			SC	0.025	*Type F*	B
			ML	0.022	*Type F*	A
			CL	0.022	*Type F*	C
Charlmont (ch)	Group B/C	endemic	OL	Peaty	*Type F*	J
			ML	>0.047	*Type F*	C
			ML	>0.087	*Type F*	C
			ML	0.054	*Type F*	A

Table 4 Dorrigo Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Cloughers Creek (cg)	Group B/C	none	ML	0.052	*Type F*	I
			ML	0.058	*Type D*	E
			CL	0.036	*Type D*	E
	Group B		GM	0.007	*Type F*	J
			CL	0.037	*Type D*	B
			ML	0.052	*Type D*	D
			SC	0.043	*Type D*	D
Dairyville (da)	Group C	none	SM	0.021	*Type F*	J
			OL	0.039	*Type F*	J
			ML	0.039	*Type F*	A
			ML	0.023	*Type F*	A
Deadmans (de)	Group D	none	OL	0.027	*Type D*	J
			OL	0.017	*Type D*	J
			ML	0.045	*Type D*	D
			CL	0.032	*Type D*	D
Dangar Falls (df)	Group C/D	none	OL	0.019	*Type F*	J
			CH	0.051	*Type F*	C
			CL	0.038	*Type F*	C
			MH	0.027	*Type D*	B
Diehappy (di)	Group C/D	none	SM	0.035	*Type F*	J
			SM	0.051	*Type D*	J
			ML	0.061	*Type D*	D
Dorrigo (do)	Group C	none	OL	0.011	*Type F*	J
			GM	0.052	*Type F*	I
			CL	0.024	*Type F*	C
	Group C/D		CL	0.024	*Type D*	A
			MH-CH	>0.090	*Type F*	D
			OL	0.016	*Type F*	J
Dundurrabin (du)	Group D	none	SC-CL	0.019	*Type F*	B/A
			SC	0.027	*Type F*	B
			SC	0.015	*Type F*	B
			SC	0.055	*Type F*	C
Glenreagh (gl)	Group B	none	SM	0.015	*Type F*	J
			CH	0.020	*Type D*	A
			SM	0.033	*Type D*	J
	Group C/D		ML-CL	0.028	*Type F*	J
			CL	0.038	*Type D*	B
			CL	0.036	*Type D*	D
			CL	0.044	*Type D*	E
Gleniffer (gn)	Group B	sporadic	CL	0.025	*Type F*	B
		none	CL	0.019	*Type F*	C
			CL	0.079	*Type F*	C
Gap Road (gp)	Group B	none	SP	0.004	*Type C*	J
			SC	0.004	*Type F*	I
			SC	0.002	*Type C*	I
			SP	0.010	*Type C*	I
			PT	Peaty	*Type F*	J
Kellys Creek (kc)	Group B	none	SC	0.035	*Type F*	I
			SC	0.028	*Type F*	B
			SM	0.016	*Type F*	J

Table 4 Dorrigo Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Kooralbyn (ko)	Group C/D	none	OL	0.013	*Type D*	J
			ML	0.046	*Type D*	B
			ML-CL	0.044	*Type D*	D
			MH	0.042	*Type D*	D
			CL	>0.093	*Type F*	G
Kremnos (kr)	Group C/D	none	ML	0.036	*Type D*	B
			SC	0.010	*Type F*	B
			CL	0.084	*Type F*	C
			CL	0.050	*Type F*	B
			SP	0.016	*Type F*	J
			SP	0.000	*Type C*	I
Megan (me)	Group B	none	OL	>0.027	*Type F*	J
			ML	0.045	*Type D*	B
			ML	0.048	*Type F*	C
			ML	>0.090	*Type F*	C
			MH	>0.091	*Type F*	I
McGraths Hump (mg)	Group C/D	none	OL	0.010	*Type F*	J
			CL	0.022	*Type F*	A
			CL	>0.077	*Type F*	C
Never Never (nn)	Group B	none	ML	0.042	*Type D*	B
			OL	0.019	*Type F*	J
			CL	0.030	*Type D*	A
			CL	0.090	*Type F*	C
Nymboida Gorge (ny)	Group C/D	none	ML	0.051	*Type D*	D
			SC	0.043	*Type D*	D
			CH	0.022	*Type D*	D
			SM	0.044	*Type D*	J
Orara (or)	Group B	none	ML	0.041	*Type F*	A
			ML-CL	0.047	*Type D*	D
			ML	>0.090	*Type F*	C
			SC	0.000	*Type C*	I
Pine Creek (pn)	Group C	sporadic	OL	0.018	*Type F*	J
			CL	0.028	*Type F*	C
			OL	Peaty	*Type F*	J
			ML-CL	0.047	*Type D*	B
			MH	0.060	*Type D*	A
			SM	0.050	*Type F*	J
Promised Land (pl)	Group D	none	ML	>0.090	*Type F*	C
			ML	0.021	*Type F*	A
			CL	0.071	*Type F*	C
			ML	0.049	*Type F*	C
Paddys Plains (pp)	Group C	none	CL	0.014	*Type F*	C
			CH	0.058	*Type F*	C
			OL	0.011	*Type F*	J
	Group B		OL	0.016	*Type F*	J
			CL	0.042	*Type F*	C
Rocky Creek (rc)	Group C/D	none	OL	0.004	*Type F*	J
			CL	0.025	*Type F*	C

Table 4 Dorrigo Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Sherwood (sh)	Group C	none	SM	0.042	*Type F*	I
			SC	0.024	*Type F*	I
			SC	0.038	*Type F*	I
Suicide (su)	Group B	none	OL	0.023	*Type F*	J
			ML	0.041	*Type F*	A
			ML	>0.086	*Type F*	C
			ML	>0.091	*Type F*	D
Tallawudjah (tw)		none	CL	0.074	*Type F*	C
	Group C		ML	>0.058	*Type D*	J
			ML	>0.064	*Type D*	J
			ML	0.050	*Type D*	B
Towallum (to)	Group C/D	none	CL	0.029	*Type D*	A
	Group D		ML	0.067	*Type D*	I
			CL	0.039	*Type D*	E
			CL	0.058	*Type F*	B
Timber Top (tt)	Group C	none	SM	0.023	*Type F*	J
			SC	0.038	*Type F*	B
			CL	0.027	*Type F*	A
			SC	0.006	*Type F*	C
			ML	0.049	*Type F*	A
			ML	0.056	*Type F*	A
Ulong (ul)	Group B	none	OL	0.016	*Type F*	J
			CL	0.033	*Type F*	C
			CL	>0.086	*Type F*	C
			ML	0.046	*Type F*	A
Valery (va)	Group C/D	none	OL	0.019	*Type F*	J
			CL	0.082	*Type F*	C
			CL	0.083	*Type F*	C
			SM	0.044	*Type F*	J
			SM	0.039	*Type C*	J
Walters Creek (wc)	Group B	none	SP	0.007	*Type C*	I
			SP	0.010	*Type C*	J
			SC	0.000	*Type C*	I
	Group C/D		SW	0.019	*Type C*	I
			CL	0.020	*Type F*	A
			SC	0.018	*Type F*	C

Table 5 Coffs Harbour Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor	Sediment type	Sediment basin wall construction (earth)
Arthurs Gap (ag)	Group D	0.00	none	SW	0.007	*Type C*	J
				SC	0.013	*Type F*	J
				ML	0.067	*Type F*	A
Barcoongere (bc)	Group B	2.16	sporadic	CL	0.031	*Type F*	J
				CL	0.037	*Type F*	A
				CH	>0.086	*Type F*	C
				CH	0.055	*Type F*	C
				CL	0.026	*Type D*	A
Bundagen (bd)	Group B	0.63	endemic	SM	0.019	*Type D*	J
				SP	0.000	*Type C*	J
				PT	Peaty	*Type F*	J
Bobo (bo)	Group D	0.00	none	CL	>0.028	*Type F*	B
				CL	>0.061	*Type D*	D
				CL	0.056	*Type D*	nt
Bucca (bu)	Group C	0.00	none	ML	Peaty	*Type F*	A
				CL	0.032	*Type F*	A
	Group B			ML	0.044	*Type F*	C
				SM-ML	>0.077	*Type F*	I
Bagawa (bw)	Group C	0.00	none	SM	0.022	*Type F*	J
				SC	0.032	*Type D*	D
				CL	0.011	*Type D*	A
	Group C/D			SM	0.027	*Type F*	I
				CH	0.029	*Type D*	B
				CL	0.030	*Type D*	A
Charlmont (ch)	Group B	91.75	endemic	OL	Peaty	*Type F*	J
				ML	>0.047	*Type F*	C
				ML	>0.087	*Type F*	C
	Group D			ML	0.054	*Type F*	A
Dairyville (da)	Group B	0.75	sporadic	ML	0.040	*Type F*	A
				ML	0.055	*Type F*	A
	Group B			ML	>0.052	*Type D*	A
				ML	>0.063	*Type D*	A
Glenreagh (gl)	Group C	0.00	none	CL	0.056	*Type D*	D
				CL	0.054	*Type D*	B
				CL	0.035	*Type F*	C
				SW	0.022	*Type F*	J
				SC	0.050	*Type F*	B
	Group C/D			SC	0.036	*Type D*	D
				CL	0.028	*Type D*	B
Gap Road (gp)	Group B	0.00	none	SC	0.004	*Type F*	I
				SC	0.002	*Type C*	I
				SP	0.010	*Type C*	I
Kremnos (kr)		0.00	none	ML	0.036	*Type D*	B
	Group C/D			SC	0.010	*Type F*	B
				CL	0.084	*Type F*	C
				CL	0.050	*Type F*	B
				SP	0.016	*Type F*	J
				SP	0.000	*Type C*	I
Look-At-Me-Now	Group B-D	1.85	sporadic	SM	0.033	*Type F*	J
(lo) SM					0.030	*Type C*	J

Table 5 Coffs Harbour Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor	Sediment type	Sediment basin wall construction (earth)
				SC	0.017	*Type F*	B
Moonee (mo)	Group D	2.56	sporadic	ML	0.053	*Type F*	A
				ML	>0.079	*Type D*	nt
				GP	0.023	*Type F*	I
Newry (ne)	Group C/D	1.06	sporadic	PT	Peaty	*Type F*	J
				ML	0.032	*Type D*	J
				ML	>0.081	*Type F*	D
				OL	0.035	*Type D*	J
Newports Creek (np) OL	inapplicable	46.09	endemic	CL	>0.086	*Type F*	C
					Peaty	*Type F*	J
				CL	0.034	*Type D*	B
Orara (or)	Group B/C	0.00	none	ML	0.060	*Type F*	nt
				OL	0.026	*Type D*	J
				OL	0.052	*Type D*	J
				ML	0.035	*Type F*	A
Pine Creek (pn)	Group C	0.60	sporadic	CL-CH	0.037	*Type F*	nt
Raleigh (ra)	Group B	94.73	endemic	ML	>0.065	*Type D*	I
				CL	>0.063	*Type D*	nt
				ML	>0.063	*Type D*	B
	Group C			CL	0.059	*Type D*	nt
				SW	0.017	*Type F*	I
Red Range (re)	Group B	0.00	none	SM-ML	0.039	*Type F*	B&I/A
				SW	0.024	*Type F*	I
				SC	0.025	*Type F*	C
				GP	0.040	*Type C*	J
				SC	0.024	*Type F*	B
Goolawah (go)	Group A	3.80	sporadic	SP	0.016	*Type C*	nt
				SP	0.023	*Type C*	nt
Sherwood Creek (sc)	Group A	0.00	none	OL	0.016	*Type F*	J
				SW	0.015	*Type F*	I
Sherwood (sh)		0.00	none	PT	Peaty	*DP not tested*	J
				SM	Peaty	*Type F*	I
				SM	0.039	*Type F*	I
				SM	0.042	*Type F*	I
	Group C/D			SC	0.024	*Type F*	I
				SC	0.038	*Type F*	I
Suicide (su)	Group B	0.00	none	OL	0.025	*Type F*	J
				ML	0.024	*Type F*	A
				CL	0.037	*Type F*	B
				CL	0.037	*Type F*	B
Toormina (tm)	Group D	75.75	endemic	PT	Peaty	*Type F*	J
				OL	>0.020	*Type F*	J
				SM-ML	0.077	*Type F*	D
				SM	0.040	*Type F*	J
				PT	Peaty	*Type F*	J
				ML	0.053	*Type D*	B
Tallawudjah (tw)	Group C	0.00	sporadic	ML-CL	0.026	*Type D*	J
				CL-SC	0.045	*Type F*	nt

Table 5 Coffs Harbour Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor	Sediment type	Sediment basin wall construction (earth)
				CL	0.029	*Type D*	A
				CL	0.032	*Type D*	A
Ulong (ul)		0.22	sporadic	CL	0.032	*Type F*	C
	Group C			ML	>0.038	*Type F*	J
				ML	0.040	*Type D*	A
				CL	0.024	*Type F*	C
				CL	0.082	*Type F*	C
	Group B/C			OL	0.017	*Type F*	J
				CL	0.052	*Type F*	C
				CL	0.073	*Type F*	C
				CL	0.079	*Type F*	C
				CL	0.085	*Type F*	C
				ML	0.050	*Type D*	A
Walters Creek (wc)	Group D	0.00	none	SM	0.008	*Type F*	B&I
				SM	0.011	*Type F*	I
				SC	0.032	*Type F*	C
	Group C/D			SM	0.012	*Type F*	B&I
				CL	0.025	*Type F*	A
				CL	0.014	*Type F*	A
				CL	0.024	*Type F*	A
				SC-CL	0.055	*Type F*	C
				CH	0.015	*Type D*	G
	Group C/D			CL	0.034	*Type D*	D
				SC	0.027	*Type C*	I
				CH	0.018	*Type D*	G
				CL	0.019	*Type D*	A

Table 6 Macksville Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Austral Eden (ae)	Group B	99.33	endemic	ML	0.055	*Type F*	I
				ML	0.065	*Type F*	A
	Group D			OL	>0.019	*Type F*	J
				MH	0.048	*Type D*	A
				ML	0.080	*Type D*	I
Aldavilla (al)	Group C	0.00	none	ML	0.046	*Type D*	J
				ML	0.058	*Type D*	B
				SM-ML	0.042	*Type D*	J/B
	Group C/D			ML	0.049	*Type F*	B
				CH	0.016	*Type D*	A
				CH	0.021	*Type D*	B
				ML	Pan	*Type F*	A
				ML	Pan	*Type F*	B
	Group C/D			ML	0.042	*Type F*	J
				ML	0.046	*Type D*	B
				CL	0.037	*Type F*	A
				CL	0.087	*Type F*	C
Bowra Creek (ba)	Group D	0.97	sporadic	OL	0.050	*Type F*	J
				ML	0.060	*Type F*	A
				ML	0.056	*Type D*	B
				ML	0.058	*Type F*	C
	Group C			OL	>0.033	*Type F*	J
				ML	>0.059	*Type D*	B
				CL	0.047	*Type D*	B
	inapplicable			OL	0.028	*Type F*	J
				ML	0.056	*Type D*	B
Belgrave Falls (bf)	Group B	0.00	none	SM	0.022	*Type F*	I
				SM	0.056	*Type F*	I
	Group A/B			SM	0.019	*Type F*	I
				SM	0.019	*Type F*	I
Broads Mountain (br)	Group C/D	0.00	none	SM	0.047	*Type F*	J
				SM	0.063	*Type F*	J
				SM-ML	0.063	*Type D*	D
				SM	Peaty	*Type F*	J
				SM	0.036	*Type F*	D
				GM	0.059	*Type C*	J
Big Smoky (bs)	Group B	0.06	sporadic	SM	0.026	*Type F*	J
				SM	0.034	*Type F*	J
				CL	>0.089	*Type F*	G
				CL	>0.091	*Type F*	D
	Group B			SM	0.017	*Type F*	J
				SC	0.029	*Type F*	B
				CL	0.044	*Type F*	C
				CL	0.057	*Type F*	G
	Group D			SW	0.007	*Type F*	J
				SP	0.031	*Type F*	I
	Group D			SM	Peaty	*Type F*	J
				ML	0.038	*Type F*	C
				CL	0.045	*Type F*	C
Cairncross (ca)	Group C/D	3.70	common	ML	0.043	*Type F*	A
				CL	0.024	*Type D*	G
				CL	0.044	*Type F*	B
				CL	>0.091	*Type F*	H
	Group C/D			OL	0.017	*Type F*	J
				CH	0.036	*Type D*	A

Table 6 Macksville Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
				CH	0.034	*Type F*	A
Clybucca (cy)	Group C/D	38.73	endemic	OL	Peaty	*Type F*	J
					0.034	*Type F*	nt
					0.023	*Type F*	nt
				OL	Peaty	*Type F*	J
				CL	0.042	*Type D*	B
				PT	Peaty	*Type F*	J
				OL	0.023	*Type F*	J
				SM	0.040	*Type F*	I
				SM	0.044	*Type F*	I
Diehappy (di)	Group C	0.15	sporadic	OL	Peaty	*Type F*	J
				ML	0.048	*Type D*	B
				ML	0.053	*Type D*	D
	Group C			SM-ML	0.019	*Type F*	B&I/A
				SM	0.028	*Type F*	B&I
	Group D			SM	0.045	*Type F*	D
				SM	0.050	*Type F*	J
Euroka (eu)	Group C	0.01	sporadic	OL	0.027	*Type F*	J
				SM-ML	0.043	*Type D*	D
				GC	0.050	*Type C*	E
	Group C			SM	0.026	*Type F*	J
				SM	0.038	*Type D*	J
				CL	0.017	*Type D*	B
				CL	0.019	*Type D*	D
Goolawah (go)	Group A	1.15	sporadic	SP	0.007	*Type C*	I
				SP	0.000	*Type C*	I
				SP	0.013	*Type C*	J
				SP	0.010	*Type C*	J
Hat Head (hh)	Group B/C	4.62	sporadic	SM	Peaty	*Type C*	J
				SP	0.000	*Type C*	I
				PT	Peaty		J
				PT	Peaty	*Type F*	J
	Group B/C			SP	0.007	*Type F*	J
				SP	0.010	*Type C*	J
				SM	Pan	*Type F*	J
Huntingdon (hn)	Group B/C	0.00	none	SM	0.031	*Type F*	J
				ML	0.056	*Type D*	B
				SM	0.049	*Type F*	J
Kundabung (kg)	Group C	0.28	sporadic	ML	0.050	*Type D*	D
				CH	0.022	*Type D*	G
				CL	>0.090	*Type F*	C
	Group C			OL	0.037	*Type F*	J
				ML	0.055	*Type D*	A
				CL	0.032	*Type D*	G
				CL	0.042	*Type D*	B
Killick (ki)	Group A	0.15	sporadic	SP	0.000	*Type C*	J
				SP	0.000	*Type C*	I
Killiekrankie (kk)	Group C/D	0.00	none	PT	Peaty	*Type F*	J
				OL	0.014	*Type D*	J
				ML	0.033	*Type F*	C
				SM	0.025	*Type F*	K

Table 6 Macksville Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Macleay Arm (ma)	Group D	57.26	endemic	PT	Peaty	*Type F*	J
				PT	Peaty	*Type F*	J
	Group A/B			PT	Peaty	*Type F*	J
				SP	0.016	*Type C*	J
Mistake (mk)	Group C	0.00	none	OL	0.010	*Type F*	J
				ML	0.050	*Type D*	B
	Group C			ML	0.021	*Type F*	A
				CL	0.032	*Type D*	A
				CL	0.031	*Type D*	A
	Group B			OL	0.020	*Type F*	J
				CL	0.040	*Type F*	A
Maria River (mr)	Group B	96.79	endemic	ML	>0.047	*Type F*	A
				CL	>0.089	*Type F*	C
				ML	0.065	*Type D*	B
	Group C			OL	>0.034	*Type D*	J
				ML	0.052	*Type D*	D
				CL	0.054	*Type D*	D
	Group C			OL	0.027	*Type F*	J
				CL	0.038	*Type D*	D
				ML	0.061	*Type D*	D
Mungay Mountain (mu)	Group D	0.00	none	SP	0.046	*Type F*	J
	Group B			GP	0.023	*Type C*	J
				GP	0.041	*Type C*	J
				SC	0.054	*Type D*	D
Newry (ne)	Groupo C/D	1.35	sporadic	SM	Peaty	*Type F*	J
				SM	0.030	*Type F*	J
				SC	0.034	*Type C*	B
	Group C			OL	0.044	*Type F*	J
				ML	0.066	*Type F*	A
				CL	>0.095	*Type F*	C
				CL	>0.095	*Type F*	C
	Groupo C/D			ML	0.043	*Type F*	I
				MH	>0.075	*Type D*	A
				ML	0.074	*Type F*	D
Nambucca River (nr)	Group C	0.25	sporadic	SM	0.017	*Type F*	I
				SM	0.033	*Type F*	I
				OL	0.028	*Type F*	J
	Group B/C			SM-ML	0.042	*Type F*	I
				ML	0.067	*Type F*	I
	Group B			ML	0.063	*Type F*	B
				ML	0.068	*Type D*	D
				ML	>0.094	*Type F*	D
Pine Creek (pn)	Group B	0.06	sporadic	SM	0.040	*Type F*	J
				CL	>0.083	*Type F*	C
	Group C/D			GM	0.018	*Type C*	J
				ML	0.046	*Type F*	A
				ML	0.052	*Type F*	D
	Group C/D			OL	0.029	*Type F*	J
				CL	0.031	*Type D*	D
	Group C/D			SM	0.020	*Type F*	I
				SM	0.031	*Type C*	J
Raleigh (ra)	Group C/D	64.76	widespread	OL	>0.018	*Type F*	J
				MH	0.056	*Type D*	B
				ML	0.070	*Type D*	B

Table 6 Macksville Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	Group C			ML	>0.062	*Type F*	I
				ML	0.074	*Type F*	B
				ML	0.073	*Type D*	D
Roses Knob (rk)	Group D	0.09	sporadic	SM	0.048	*Type F*	J
	Group D			SM	0.019	*Type F*	J
				GC	0.029	*Type D*	D
	Group C			OL	0.027	*Type D*	J
				ML	0.040	*Type D*	D
				CL	0.043	*Type D*	B
Rosewood Road (rw)	Group B/C	0.10	sporadic	OL	0.025	*Type F*	J
				ML	0.054	*Type D*	A
				CH	0.075	*Type F*	C
	Group B/C			OL	0.025	*Type F*	J
				ML	0.053	*Type F*	B
				CL	>0.085	*Type F*	C
Seven Oaks (se)	inapplicable	90.16	endemic	PT	Peaty	*Type F*	J
				ML	0.044	*Type D*	A
				CL	0.047	*Type D*	B
				ML	Peaty	*Type F*	B
				PT	Peaty	*Type F*	J
				PT	Peaty	*Type F*	J
				MH	>0.087	*Type F*	D
				ML	>0.085	*Type F*	D
				ML	Peaty	*Type D*	J
				ML	0.051	*Type D*	B
				SM	0.024	*Type F*	B&I
				ML	0.075	*Type F*	A
Snowy Range (sn)	Group D	0.00	none	OL	0.016	*Type F*	J
				CL	0.082	*Type F*	C
	Group D			SM	Peaty	*Type F*	I
	Group C/D			PT	Peaty	*Type D*	J
				ML	0.064	*Type D*	D
Stuarts Point (sp)	Group A	4.75	endemic	SP	0.005	*Type C*	J
				SP	0.000	*Type C*	J
				SP	Pan	*Type C*	I
Tamban (tb)	Group C/D	0.00	none	OL	0.041	*Type F*	J
				SM	0.055	*Type F*	J
	Group C			ML	0.031	*Type F*	J
				CL	0.033	*Type D*	B
				CL	0.020	*Type D*	B
	Group D			ML	0.066	*Type D*	E
				ML	0.058	*Type D*	D
				SM-OL	0.028	*Type D*	J
				SM	0.041	*Type D*	J
Thumbs Creek (tc)	inapplicable	0.00	none	SM	0.019	*Type F*	J
				SM-ML	0.019	*Type F*	B&I/A
				GP-GM	0.007	*Type C*	I
				OL	0.035	*Type F*	J
Temagog (tg)	Group C	0.00	none	GM	0.048	*Type F*	J
				GM	0.054	*Type D*	J
				GC	0.031	*Type C*	B
Toormina (tm)	inapplicable	93.05	endemic	PT	Peaty	*Type F*	J
				SM	0.030	*Type F*	I

Table 6 Macksville Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
				SM	0.048	*Type F*	I
				SM	0.034	*Type F*	J
				SP	0.012	*Type C*	I
				OL	0.036	*Type F*	J
				ML	Peaty	*Type F*	J
				ML	0.038	*Type F*	A
				CL	0.033	*Type D*	B
Valla (vl)	Group B	0.56	sporadic	SM	0.016	*Type F*	J
				SC-CL	0.020	*Type F*	C
				CL	0.073	*Type F*	G
				CL	0.089	*Type F*	G
Warrell Creek (wa)	Group B	0.14	sporadic	OL	0.034	*Type F*	J
				CL	0.072	*Type F*	C
				CL	0.041	*Type F*	C
	Group C			OL	0.014	*Type F*	J
				CL	0.030	*Type D*	A
				CL	>0.088	*Type F*	C
				ML	>0.092	*Type F*	I
	Group B			OL	0.017	*Type F*	J
				CL	0.078	*Type F*	C
				ML	>0.087	*Type F*	C
	Group D			OL	0.032	*Type F*	J
				ML	0.059	*Type D*	D
				CL	>0.089	*Type F*	C
				CL	>0.091	*Type F*	C
Welshes Creek (we)	Group C	0.00	none	ML	0.020	*Type F*	A
				CL	0.021	*Type D*	A
	Group C			SM	0.013	*Type F*	J
				GM	0.026	*Type F*	B&I
				CH	0.018	*Type D*	G
	Group C			ML	0.033	*Type F*	C
				ML	0.036	*Type F*	D
				SM	0.027	*Type F*	B&I
Way Way (ww)	Group C/D	0.00	sporadic	ML	Peaty	*Type F*	J
				ML	0.047	*Type D*	B
				CL	>0.088	*Type F*	C
	Group D			SM-ML	0.024	*Type F*	J
	Group B			OL	0.028	*Type F*	J
				ML	0.060	*Type F*	C
				ML	0.038	*Type F*	A
	Group C/D			OL	0.022	*Type F*	J
				ML	0.057	*Type D*	D
				ML	0.046	*Type D*	B
Yarrahapinni (ya)	Group C	0.00	none	OL	0.019	*Type F*	J
				ML	0.038	*Type F*	A
				CL	0.039	*Type F*	C

Table 7 Curlewis Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Battery Hill (bh)	generally high erosion hazards; some steep slopes; shallow soils and rock outcrop common; some localised aquifer re-charge areas; widespread risks to foundations	10 to 50	Group D	none	ML	0.013	*Type F*	J
					SM	0.046	*Type F*	I
					ML	0.022	*Type F*	A
					CH	0.035	*Type D*	H
					CL	0.043	*Type D*	B
Black Jack (bj)	large aquifer re-charge area; localised areas of high erosion hazard, shallow soils and rock outcrop; widespread risks to foundations	4 to 7	Group D	none	ML	0.033	*Type F*	J
			Group C		CL	0.019	*Type D*	K
			Group B/C		CH	0.015	*Type F*	J
					ML	0.034	*Type F*	A
					CL	0.025	*Type D*	H
					CH	0.018	*Type F*	H
					CH	0.020	*Type F*	H
Booloocooroo (bo)	generally high erosion hazards; high run-on, instances high watertables seasonal waterlogging, flooding in low areas; widespread risksk to foundations; localised mine subsidence	0 to 3	Group C	none	SC	0.016	*Type F*	I
					ML-CL	0.050	*Type F*	J
					ML-CL	0.024	*Type F*	J
					CH	0.024	*Type D*	F
					CH	0.023	*Type F*	H
					CH	0.028	*Type F*	G
					SC-CL	0.037	*Type F*	B/A
					SC-ML	0.050	*Type F*	I
					CL	0.031	*Type D*	A
					SC-CL	0.043	*Type D*	B
					CH	0.025	*Type D*	F
Carroll Creek (ca)	high erosion hazards; high run-on, widespread flooding in low areas; frequent high watertables and waterlogging; aquifer re-charge areas and localised salinity; widespread risks to foundations	<1	Group D	none	CL-MH	0.023	*Type D*	J
			GroupC		CL	0.035	*Type D*	J
					CL	0.042	*Type D*	D
					CH	0.029	*Type D*	G&F
					CH	0.019	*Type D*	G&F
Conadilly (cd)	generally high erosion hazards; high run-on, seasonal waterlogging and flooding of low areas; some permanently high watertables; localised aquifer re-charge, widespread salinity hazard; widespread risks to foundations	<0.5	Group C/D	none	OH	0.010	*Type D*	J
					CH	Peaty	*Type F*	J
			Group C/D		OH	Peaty	*Type D*	J
					CH	0.008	*Type D*	J
					CH	0.015	*Type D*	J
					CH	0.017	*Type D*	F
					CH	0.028	*Type D*	E
					CH	0.016	*Type D*	F

Table 7 Curlewis Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Carinya (cr)	generally high erosion hazards; large aquifer re-charge area; shallow soils and rock outcrop in upslope areas; high run-on in low areas; localised risks to foundations	3 to 10	Group C	none	CL	0.027	*Type F*	J
					CL	0.031	*Type F*	J
					CL	0.036	*Type D*	B
					CH	0.019	*Type D*	F
Curlewis Swamp (cu)	generally high run-on; widespread risks to foundations	<1	Group D	none	CL	0.022	*Type F*	J
					CH	0.021	*Type D*	H
					CH	0.029	*Type F*	H
Dead Horse (dh)	high run-on and aquifer re-charge area; generally high erosion hazards; localised high watertables; seasonal waterlogging and flooding of low areas; some dryland salinity; localised risks to foundations	<3	Group C	none	ML-CL	0.038	*Type F*	J
					SM	0.055	*Type D*	J
			Group C/D		ML-CL	0.049	*Type D*	J
					CL	0.035	*Type D*	J
					CL	0.027	*Type F*	G
					CH	0.032	*Type D*	F
East Lynne (el)	generally steep slopes and high erosion hazards; widespread mass movement and rock fall; widespread distribution of non	32 to 56	Group D	none	SC	0.014	*Type F*	J
					SC-ML	0.013	*Type F*	J
Fullwoods Road (fr)	generally high water erosion hazards; high run-on and permanently high watertables in low areas; localised aquifer re-charge and saline areas; localised wind erosion hazard; localised risks to foundations	2 to 8	Group B/C	none	ML	0.050	*Type F*	J
			Group C		CL	0.033	*Type D*	J
					SC-CL	0.051	*Type D*	D
					CL	0.035	*Type D*	B
					SC	>0.098	*Type F*	C
					CL	0.024	*Type D*	G
					CL	0.021	*Type F*	G
Green Island (gi)	non cohesive soils subject to high wind and wave erosion hazards; some permanently high watertables and flooding in low areas; localised non cohesive materials; areas of aquifer re-charge;	<3		none	SW	Peaty	*Type F*	J
			Group C		SP	0.011	*Type C*	J
					CL	0.022	*Type D*	H
Goran Lake (gl)	generally low lying area subject to high run-on, permanently high watertables, waterlogging and flooding; very high water and wave erosion hazards; widespread aquifer re-charge and salinity; widespread risks to foundations	0	Group C	none	CH	0.015	*Type D*	J
					CH	0.015	*Type D*	G&F
					CH	0.021	*Type D*	H&F
Goscombes Road (go)	generally high erosion hazards; high run-on and seasonal waterlogging of low areas; localised flooding and perma_nently high watertables	1 to 5	Group C	none	ML	0.034	*Type F*	J
					ML	0.034	*Type F*	I
					SM	0.051	*Type F*	J

Table 7 Curlewis Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					CL	0.023	*Type D*	G
Hartfell (ha)	generally high erosion hazards; localised steep slopes, widespread shallow soils and rock outcrops; areas of high wind erosion; high run-on to some low areas; widespread risks to foundations	8 to 20	Group D Group B/C	none	ML-CL ML SM-SC CL	0.049 0.047 0.054 0.059	*Type F* *Type F* *Type F* *Type F*	J A I I
Kilphysics Road (kr)	generally high erosion hazards; localised shallow soils and rock outcrop; high run-on to low areas, widespread aquifer re-charge; permanently high watertables and seasonal waterlogging in some low areas; instances of dryland salinity; widespread risks to foundations	2 to 8	Group B/C Group C	none	ML SM-ML ML CL CL	0.014 0.042 0.039 0.025 0.028	*Type F* *Type F* *Type F* *Type F* *Type D*	A J D G G
Lever Gully (lg)	generally high erosion hazards; large areas of high run-on and aquifer re-charge; localised flooding and high watertable hazards; instances of salinity; widespread risks to foundations	2 to 10	Group C Group B/C	none	CH CH CH CH CL CH CL ML-CL	0.026 0.010 0.024 0.022 0.040 0.023 0.038 0.041	*Type D* *Type D* *Type F* *Type D* *Type F* *Type D* *Type F* *Type F*	J J H F J H G B
Long Mountain (lm)	generally high erosion hazards; localised waterlogging and aquifer recharge in low lying areas; shallow non cohesive soils and rock outcrop in upslope areas; localised risks to foundations	2 to 12	Group C Group D Group C	none	CL ML ML CL CH SC ML CL CH	0.032 0.020 0.050 0.015 0.020 0.032 0.048 0.032 0.021	*Type F* *Type F* *Type F* *Type F* *Type D* *Type F* *Type F* *Type D* *Type D*	J A J J H B A B H
Lochaber (lo)	generally low lying areas with high run-on, permanently high watertables and localised seasonal waterlogging; large areas of aquifer re-charge and salinity; widespread wind erosion and localised wave erosion; some shallow soils. widespread risks to foundations	1 to 20	Group C Group C	none	CL CH CH CH	0.002 0.009 0.015 0.012	*Type D* *Type F* *Type D* *Type D*	G H H G&F
Leslies Road (lr)	generally low lying area with high erosion hazards; high run-	<2	Group D	none	CH	Peaty	*Type D*	J

Table 7 Curlewis Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	on, permanently high watertables, waterlogging in low areas; widespread aquifer re-charge and salinity hazard; wide_spread risks to foundations		Group C/D		CH	0.016	*Type D*	J
					CH	0.024	*Type F*	H
					CH	0.022	*Type D*	F
					CH	0.029	*Type F*	H
					CH	0.025	*Type D*	H
Maryland (ma)	generally high erosion hazards; large low lying areas with high run-on; large aquifer re-charge areas; high watertables and localised flooding in some low areas; widespread risks to foundations	1 to 10	Group B/C	none	CH	0.024	*Type F*	G
			Group B/C		CL	0.033	*Type F*	A
					CH	0.026	*Type D*	F
					CH	0.025	*Type D*	F
					SM	0.069	*Type F*	J
Mecathloan Downs (md)	large areas of high run-on, aquifer re-charge and dryland salinity; localised waterlogging; widespread wind erosion; localised risks to foundations	2 to 8	Group C	none	ML	0.040	*Type F*	A
					CL	0.037	*Type F*	A
					CL	0.009	*Type F*	G
Mount Milbulla (mm)	generally high erosion hazards steep slopes, shallow soils and rock outcrops; widespread rock falls; localised risks to foundations	10 to 85	Group D	none	SC	Peaty	*Type F*	J
					SM-SC	0.026	*Type F*	J
					CH	0.029	*Type D*	J
Mooki River (mo)	generally high erosion hazards; low lying areas subject to high run-on, seasonal waterlogging and flooding; widespread risks to foundations	<15	Group C	none	CL	0.025	*Type D*	G
					CH	0.030	*Type F*	H
					SC	0.010	*Type C*	B
					CL	0.021	*Type F*	A
Mount Tamarang (mt)	generally high erosion hazards steep slopes, shallow soils and rock outcrops; widespread mass movement hazard; widespread risks to foundations	10 to 80	Group B/C	none	ML	Peaty	*Type F*	J
			Group B		CL	0.009	*Type D*	J
					CL	0.031	*Type F*	A
					CL	0.041	*Type F*	B
					ML-CL	0.055	*Type F*	B
					SC	0.037	*Type F*	K
Mount Wilga (mw)	generally steep slopes and high erosion hazards; widespread mass movement and rock fall; localised distribution of non cohesive soils and large aquifer re-charge areas; shallow soils and rock outcrop upslope; widespread risks to foundations	25 to >100	Group C	none	SC-ML	0.024	*Type F*	B/A
			Group B		CL	0.011	*Type F*	J
					ML-CL	0.035	*Type F*	B
					CH	0.018	*Type F*	G
Noojee (nj)	generally high erosion hazards; large areas of high run-on and aquifer re-charge; widespread salinity; permanently high watertables and seasonal waterlogging in some low areas;	<8	Group C/D	none	ML-CL	0.022	*Type F*	J
			Group C		CH	0.018	*Type D*	J
					CH	0.019	*Type D*	H

Table 7 Curlewis Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	instances of wind erosion; widespread risks to foundations		Group D		SC	0.039	*Type F*	J
					CH	0.023	*Type D*	F
					CH	0.018	*Type F*	H
					SC	0.036	*Type F*	A
Pit Hill (ph)	generally steep slopes and high erosion hazards; widespread mass movement and rock fall; localised distribution of aquifer re-charge areas; shallow soils and rock outcrop upslope; widespread risks to foundations	15 to 80	Group B/C	none	ML	0.019	*Type F*	A
					CH	0.037	*Type F*	C
					SW	0.037	*Type F*	J
Ponderosa (pn)	generally high run-on to low areas; widespread aquifer re-charge and dryland salinity; some instances of permanently high watertables and seasonal waterlogging; widespread risks to foundations; localised instances of mine subsidence	2 to 8	Group C	none	CH	0.017	*Type D*	G
			Group B		CH	0.013	*Type D*	J
					CH	0.022	*Type F*	G
					CH	0.020	*Type D*	G
					CH	0.024	*Type F*	G
					CH	>0.090	*Type F*	H
Porcupine (po)	generally high erosion hazards; widespread shallow soils and rock outcrops; instances of non cohesive soils and wind erosion hazards; areas of aquifer re-charge; localised risks to foundations	2 to 12	Group B	none	ML	0.034	*Type F*	J
					SM-SC	0.027	*Type F*	I
					SC	0.018	*Type D*	A
					CH	0.011	*Type F*	H
Quirindi Creek (qc)	generally high erosion hazards; large, low lying areas of high run-on and aquifer re-charge; widespread flooding hazard; localised salinity; widespread risks to foundations	<1	Group C	none	ML	0.029	*Type F*	J
			Group C/D		ML	0.030	*Type F*	B
					CL	0.024	*Type D*	D
					CH	0.013	*Type D*	D
					CL	0.027	*Type D*	
					CH	>0.098	*Type F*	H
					CL	0.019	*Type D*	G
Stafford Gap (sg)	wind and water erosion hazards generally high; large areas of aquifer re-charge and localised salinity; high run-on permanently high watertables, seasonal waterlogging in some low areas; instances of mine subsidence	3 to 20	Group C	none	SC	0.033	*Type F*	J
			Group C/D		SC-ML	0.029	*Type F*	I
			Group D		ML	0.021	*Type F*	J
					SC	0.018	*Type F*	B
					SC	0.053	*Type F*	I
					SC	0.025	*Type F*	C
					SC	0.024	*Type F*	I
					SC	0.042	*Type F*	B
					CL	0.026	*Type D*	D

Table 7 Curlewis Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Tally Ho (ta)	generally high erosion hazards; shallow soils and rock outcrop upslope; localised areas of high run-on, perma_nently high watertables and aquifer recharge; instances of non cohesive soils; widespread risks to foundations	2 to 8	Group D	none	ML	Peaty	*Type F*	J
			Group B/C		ML	0.015	*Type F*	A
					CL	0.021	*Type F*	J
			Group C		CH	0.021	*Type D*	H
					CH	0.020	*Type D*	H
					CH	0.024	*Type D*	J
					CH	0.020	*Type D*	H
					CH	0.016	*Type D*	H
					SC-CL	0.028	*Type D*	G
Trinkey Forest (tf)	generally high erosion hazards; high run-on to low areas widespread dryland salinity hazard; permanently high watertables and seasonal waterlogging in some low areas;	<5	Group C/D	none	SW	0.032	*Type F*	J
			Group B/C		SC-ML	0.031	*Type F*	B
					SC-ML	0.029	*Type F*	I
					SC	0.029	*Type D*	D
					CL	0.023	*Type F*	G
					CH	0.018	*Type F*	G
Turkey Range (tu)	generally high water and wind erosion hazards; areas of shallow soils and rock outcrop upslope; localised areas of non cohesive soils;	2 to 20	Group D	none	SP	0.013	*Type F*	J
			Group B/C		SC-CL	0.017	*Type F*	J
			Group D		CL	0.034	*Type F*	J
					SP	0.004	*Type C*	I
					GC	0.032	*Type C*	I
					CH	0.020	*Type D*	H
Watermark (wa)	broad aquifer re-charge area; some steep slopes and shallow soils; high run-on to some low areas; localised areas of non cohesive soils and wind erosion hazard; localised risks to foundations; localised mine subsidence	2 to 15	Group B	none	ML	0.010	*Type F*	J
			Group D		SC	0.016	*Type C*	I
			Group C		ML	Peaty	*Type F*	J
					CH	0.020	*Type F*	C
					CL	0.035	*Type F*	G
Yarraman (ya)	generally low lying area subject to high run-on, permanently high watertables, seasonal waterlogging and flooding; very high water erosion hazards; widespread aquifer re-charge and salinity; widespread risks to foundations		Group C	none	CH	0.019	*Type D*	J
					CH	0.015	*Type D*	J
					CH	0.025	*Type D*	H
					CH	0.030	*Type D*	H
					CH	0.019	*Type D*	G&F
					CH	0.033	*Type F*	H
					CH	0.027	*Type D*	H
					CH	>0.092	*Type F*	H

Table 8 Tamworth Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Basin Gully (ba)	Group C	0.00	none	0.00	CH	0.017	*Type D*	J
					CH	0.025	*Type F*	H
					CL	0.035	*Type F*	B
					CH	0.016	*Type D*	J
					CH	0.016	*Type F*	H
					SM	0.038	*Type F*	J
Babinboon (bb)	Group C	0.00	none	0.00	SM-ML	0.042	*Type F*	J
					CL	0.019	*Type F*	A
					CL	0.028	*Type F*	G
					SM	0.020	*Type F*	B&I
					ML	0.044	*Type D*	J
					CL	0.030	*Type F*	A
					CH	0.028	*Type F*	G
					OL	0.019	*Type F*	J
					CL	0.026	*Type F*	B
					CL	0.021	*Type F*	G
Brigalows (br)	Group C	0.00	none	0.00	CL	0.028	*Type F*	J
					CL	0.030	*Type D*	A
	Group C/D				SM	0.022	*Type F*	J
					CL	0.020	*Type F*	G
					CL	0.025	*Type F*	A
					SM	0.034	*Type C*	I
	Group C				OL	0.011	*Type F*	J
					CH	0.013	*Type D*	H
					CL	0.024	*Type D*	H
					CL	0.038	*Type F*	B
					SM	0.029	*Type F*	B&I
					ML	0.024	*Type D*	J
					CH	0.014	*Type D*	F
					CH	0.016	*Type D*	G
					SM	0.022	*Type F*	J
					SM	0.027	*Type D*	J
					SC	0.019	*Type D*	B
Currabubula Creek (cc)	Group C/D	0.00	none	0.00	ML	0.040	*Type F*	J
					ML	0.051	*Type F*	A
					ML	0.047	*Type F*	A
	Group D				CL	0.033	*Type F*	J
					CL	0.038	*Type F*	B
					ML	0.040	*Type F*	A
					SM	Peaty	*Type F*	J
	Group B				SM	0.024	*Type F*	J
					SM	0.035	*Type F*	I
					ML	0.064	*Type F*	C
	Group B				SM-ML	0.033	*Type F*	J
					SM	0.019	*Type C*	I
					SM-ML	0.038	*Type F*	J/B
					CH	0.059	*Type F*	J
					CH	0.022	*Type F*	H
					CH	>0.073	*Type F*	H
	Group C				CH	0.014	*Type F*	J
					CH	>0.081	*Type F*	H
Conadilly (cd)	Group B/C	0.00	none	0.00	OL	0.007	*Type F*	J
					CH	0.010	*Type D*	H
					CH	0.009	*Type D*	F
					CH	0.009	*Type D*	F
					CH	0.046	*Type F*	H

Table 8 Tamworth Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					CH	0.020	*Type D*	H
					CH	0.017	*Type D*	H
					CH	0.015	*Type D*	F
					CH	0.012	*Type D*	H
					CH	0.011	*Type D*	H
					CH	0.028	*Type F*	H
Canna Gap (cg)	Group C/D	0.00	none	0.00	SM	0.035	*Type F*	J
	Group C				GM	0.038	*Type C*	I
					CH	0.015	*Type D*	H
	Group B				SM	0.025	*Type C*	J
					SM	0.025	*Type C*	J
Daruka (da)	Group D	0.00	none	0.00	GM	0.040	*Type F*	J
					ML	0.033	*Type D*	A
					GM	0.020	*Type C*	J
					CL	0.017	*Type F*	A
Duff's Gully (dg)	Group C/D	0.00	none	0.00	CL	0.016	*Type F*	J
					CL	0.018	*Type D*	H
					CL	0.015	*Type D*	H
					CL	0.020	*Type D*	J
					CH	0.015	*Type D*	H
					CH	0.014	*Type D*	G&F
	Group C				ML	0.034	*Type F*	J
					CL	>0.076	*Type F*	H
					CL	>0.081	*Type F*	G
					SM	0.040	*Type F*	J
					SC	0.016	*Type F*	K
					CL	0.026	*Type F*	H
					CH	0.012	*Type D*	H
					CH	0.012	*Type D*	H
	Group D				CH	0.007	*Type D*	J
					CH	0.010	*Type D*	H
					CH	0.013	*Type D*	H
					CH	0.018	*Type D*	H
					ML	0.034	*Type D*	A
Dead Horse (dh)	Group C/D	0.00	none	0.00	CL	0.029	*Type F*	J
					CH	0.012	*Type D*	F
					CH	0.016	*Type D*	D
					CH	0.016	*Type D*	H
					CH	0.014	*Type D*	F
	Group D				CH	0.016	*Type D*	J
					ML	0.044	*Type D*	B
					ML	0.026	*Type F*	A
					CL	0.027	*Type F*	G
					CH	0.018	*Type D*	H
					CH	0.018	*Type D*	H
					CH	0.017	*Type D*	H
	Group C/D				SM	0.031	*Type F*	J
					CL	0.019	*Type D*	G
					CH	0.013	*Type D*	H
Dunover (do)	Group C	0.00	none	0.00	ML	0.046	*Type F*	J
					ML	0.022	*Type F*	K
					OL	0.026	*Type F*	J
					ML	0.041	*Type F*	A
					CH	0.019	*Type F*	H
	Group D				SM	0.026	*Type F*	J

Table 8 Tamworth Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					SM	0.029	*Type F*	I
	Group B				SM	0.026	*Type F*	J
					SM-ML	0.035	*Type F*	B&I/A
					ML	0.040	*Type F*	A
					ML	0.054	*Type F*	A
	Group C				SM	0.033	*Type F*	J
					CH	0.016	*Type D*	G
					CH	0.016	*Type D*	H
Duri (du)	Group C	0.00	none	0.00	SP	0.012	*Type C*	J
					SP	0.012	*Type C*	K
					CH	0.054	*Type F*	J
					CH	0.013	*Type F*	H
					ML	0.045	*Type D*	J
					CL	0.016	*Type F*	G
	Group C/D				ML	0.044	*Type F*	J
					ML	0.057	*Type F*	A
					CL	0.021	*Type F*	G
	Group D				ML	0.046	*Type D*	J
					ML	0.046	*Type D*	A
Escott (es)	Group B/C	0.00	none	0.00	SM	0.028	*Type F*	J
					SM	0.032	*Type F*	J
					CL	0.017	*Type D*	G
Eurunderee (eu)	Group B/C	0.00	none	0.00	SM	0.031	*Type F*	J
					SM	0.018	*Type C*	I
	Group C				SM	0.038	*Type F*	J
					SM	0.044	*Type F*	I
					CL	0.028	*Type F*	A
					SC	0.029	*Type F*	B
					SM-ML	0.034	*Type D*	J
					SM	0.044	*Type D*	J
					SC	0.026	*Type F*	A
					SC	0.028	*Type F*	B
Fullwoods Hill (fh)	Group C	0.00	none	0.00	ML	0.043	*Type F*	J
					SC	0.042	*Type F*	C
	Group C/D				OL	0.028	*Type F*	J
					CL	0.015	*Type F*	G
					CL	0.017	*Type F*	G
					CL	0.017	*Type F*	G
	Group B/C				SM-ML	0.016	*Type F*	J
					ML	0.026	*Type F*	A
	Group C				ML	0.047	*Type F*	J
					ML	0.042	*Type D*	B
					CL	0.015	*Type D*	G
					CL	0.022	*Type D*	G
The Forest (fo)	Group B/C	0.00	none	0.00	CL	0.041	*Type F*	J
					CH	0.052	*Type F*	H
					CL	0.023	*Type F*	H
					CL	0.024	*Type F*	H
	Group C				ML	0.025	*Type F*	J
					CL	0.013	*Type D*	H
					CH	0.061	*Type F*	H
					OL	0.038	*Type D*	J
					ML	0.052	*Type D*	A
					CL	0.031	*Type D*	B
					ML	>0.087	*Type F*	C

Table 8 Tamworth Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Granny's Armchair (ga)	Group D	0.00	none	0.00	SM	0.014	*Type C*	J
					SM	0.018	*Type F*	J
					SM	0.026	*Type F*	J
	Group B				SM	0.013	*Type C*	J
					SM	0.021	*Type C*	I
Glenmore (gm)	Group C	0.00	none	0.00	ML	0.012	*Type F*	J
					CH	0.018	*Type D*	H
					CH	0.020	*Type D*	H
					ML	0.025	*Type F*	J
					CH	0.021	*Type F*	H
					CH	>0.087	*Type F*	H
					CH	0.055	*Type F*	J
					CH	0.015	*Type F*	H
					CH	0.015	*Type D*	H
	Group B				ML	0.032	*Type F*	J
					CH	0.050	*Type F*	C
					ML	0.056	*Type F*	J
Goonoo Goonoo (gn)	Group D	0.00	none	0.00	OL	0.031	*Type F*	J
					SC	0.020	*Type C*	I
					CL	0.031	*Type F*	A
					CL	0.036	*Type F*	G
					CH	0.022	*Type F*	G
					SC	0.025	*Type F*	B
	Group C		none		ML	0.035	*Type D*	J
					ML	0.020	*Type D*	A
					CH	0.015	*Type D*	G
	Group B				ML	0.037	*Type F*	J
					ML	0.047	*Type F*	C
					ML	0.039	*Type F*	A
					ML	0.036	*Type F*	A
					SM	0.023	*Type F*	B&I
					CL	0.029	*Type D*	J
					CH	>0.078	*Type F*	H
					CH	0.012	*Type D*	B
					OL	0.031	*Type D*	J
					OL	0.013	*Type D*	J
					CL	>0.079	*Type F*	C
					CL	>0.070	*Type F*	C
Gaspard Road (gr)	Group D	0.00	none	0.00	SM-ML	0.032	*Type F*	J
					CL	0.015	*Type F*	H
					CH	0.016	*Type D*	H
					ML	0.027	*Type D*	J
					ML	0.045	*Type D*	D
					CH	0.012	*Type D*	H
	Group C				CH	0.013	*Type F*	J
					CL	0.018	*Type D*	H
					CL	0.014	*Type D*	H
	Group D				ML	0.025	*Type F*	J
					CL	0.014	*Type D*	H
	Group C				ML	0.021	*Type F*	J
					CH	0.016	*Type D*	H
Killphysic Road (kr)	Group C	0.00	none	0.00	OL	0.025	*Type F*	J
					ML	0.039	*Type F*	A
					CL	0.021	*Type F*	H

Table 8 Tamworth Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Granny's Armchair (ga)	Group D	0.00	none	0.00	SM	0.014	*Type C*	J
					SM	0.018	*Type F*	J
					SM	0.026	*Type F*	J
	Group B				SM	0.013	*Type C*	J
					SM	0.021	*Type C*	I
Glenmore (gm)	Group C	0.00	none	0.00	ML	0.012	*Type F*	J
					CH	0.018	*Type D*	H
					CH	0.020	*Type D*	H
					ML	0.025	*Type F*	J
					CH	0.021	*Type F*	H
					CH	>0.087	*Type F*	H
					CH	0.055	*Type F*	J
					CH	0.015	*Type F*	H
					CH	0.015	*Type D*	H
	Group B				ML	0.032	*Type F*	J
					CH	0.050	*Type F*	C
					ML	0.056	*Type F*	J
Goonoo Goonoo (gn)	Group D	0.00	none	0.00	OL	0.031	*Type F*	J
					SC	0.020	*Type C*	I
					CL	0.031	*Type F*	A
					CL	0.036	*Type F*	G
					CH	0.022	*Type F*	G
					SC	0.025	*Type F*	B
	Group C		none		ML	0.035	*Type D*	J
					ML	0.020	*Type D*	A
					CH	0.015	*Type D*	G
	Group B				ML	0.037	*Type F*	J
					ML	0.047	*Type F*	C
					ML	0.039	*Type F*	A
					ML	0.036	*Type F*	A
					SM	0.023	*Type F*	B&I
					CL	0.029	*Type D*	J
					CH	>0.078	*Type F*	H
					CH	0.012	*Type D*	B
					OL	0.031	*Type D*	J
					OL	0.013	*Type D*	J
					CL	>0.079	*Type F*	C
					CL	>0.070	*Type F*	C
Gaspard Road (gr)	Group D	0.00	none	0.00	SM-ML	0.032	*Type F*	J
					CL	0.015	*Type F*	H
					CH	0.016	*Type D*	H
					ML	0.027	*Type D*	J
					ML	0.045	*Type D*	D
					CH	0.012	*Type D*	H
	Group C				CH	0.013	*Type F*	J
					CL	0.018	*Type D*	H
					CL	0.014	*Type D*	H
	Group D				ML	0.025	*Type F*	J
					CL	0.014	*Type D*	H
	Group C				ML	0.021	*Type F*	J
					CH	0.016	*Type D*	H
Killphysic Road (kr)	Group C	0.00	none	0.00	OL	0.025	*Type F*	J
					ML	0.039	*Type F*	A
					CL	0.021	*Type F*	H

Table 8 Tamworth Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					CL	0.021	*Type F*	H
	Group C				ML	0.024	*Type F*	J
					CL	0.020	*Type D*	G
	Group C				SM	0.031	*Type F*	J
					SM	0.041	*Type F*	J
					SM	0.035	*Type F*	B&I
Quipolly (qu)	Group C/D	0.00	none	0.00	SM	0.023	*Type F*	J
					GM	0.034	*Type C*	I
					SC	0.020	*Type F*	B
					CL	0.018	*Type F*	J
					CL	0.036	*Type D*	B
					CL	0.034	*Type D*	G
					ML	0.029	*Type D*	B
Moore Creek (mc)	Group B	0.00	none	0.00	ML	0.072	*Type F*	J
					ML	0.030	*Type F*	K
					SM	0.037	*Type F*	J
	Group C				ML	0.058	*Type F*	J
					SM	0.058	*Type F*	J
					SM	0.032	*Type F*	B&I
	Group B				CL	0.026	*Type D*	J
					CH	0.018	*Type D*	H&F
					CH	0.017	*Type D*	H&F
					GC	0.019	*Type D*	K
					SM	0.046	*Type F*	J
					SM	0.045	*Type F*	J
					SM	0.034	*Type F*	I
					ML	0.037	*Type F*	A
					SM	0.045	*Type F*	I
					CH	0.018	*Type F*	J
					CH	0.018	*Type F*	H
Moongabah (mg)	Group B	0.00	none	0.00	SM	0.014	*Type C*	J
					SP	0.014	*Type C*	J
	Group B/C				SM	0.034	*Type F*	J
					SM	0.038	*Type F*	J
					CL	0.021	*Type D*	B
					SC	0.014	*Type C*	B
St Mervins (mv)	Group B/C	0.00	none	0.00	SM	0.027	*Type C*	J
					SM	0.038	*Type C*	J
	Group D				GM	0.026	*Type F*	J
	Group C				SM	0.038	*Type F*	J
					ML	0.044	*Type F*	J
					CL	0.028	*Type D*	A
Narrawolga (na)	Group D	0.00	none	0.00	SM	0.030	*Type F*	J
	Group D				SM	0.020	*Type F*	J
					SM	0.023	*Type F*	J
	Group C				SM	0.025	*Type F*	J
					SM	0.032	*Type D*	J
					CL	0.018	*Type D*	A
					CL	0.022	*Type D*	A
Orchard Creek (oc)	Group C	0.00	none	0.00	OL	0.046	*Type D*	J
					ML	>0.073	*Type D*	D
					ML	0.049	*Type D*	A
					ML	>0.080	*Type D*	I

Table 8 Tamworth Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
	Group D				GM	0.026	*Type F*	J
					CL	0.051	*Type F*	G
Peel (pe)	Group B	0.00	none	0.00	PT	Peaty	*Type F*	J
					ML	0.029	*Type D*	B
					SC	0.021	*Type F*	B
	Group C				ML	0.031	*Type D*	J
					CH	0.023	*Type D*	G
					CL	0.021	*Type D*	G
	Group B/C				OL	0.014	*Type F*	J
					CL	0.029	*Type D*	E
					CL	0.026	*Type D*	G
	Group B				OL	0.027	*Type D*	J
					CH	0.017	*Type D*	F
					ML	0.032	*Type D*	J
					ML	0.044	*Type D*	B
					ML	0.024	*Type F*	J
					ML	0.045	*Type F*	A
Pine Knob (pk)	Group B/C	0.00	none	0.00	SM	0.026	*Type F*	J
					SM	0.024	*Type F*	J
					SC	0.026	*Type F*	B
Parnell (pl)	Group C/D	0.00	none	0.00	SM	Peaty	*Type F*	J
					GP-SM	0.035	*Type F*	J
					OL	0.020	*Type F*	J
	Group C				ML	0.044	*Type F*	J
					CL	0.022	*Type F*	G
					SM	Peaty	*Type F*	J
					SW	0.033	*Type F*	nt
	Group C				OL	0.012	*Type D*	J
					CH	0.014	*Type D*	H
					CH	0.018	*Type D*	H
Quirindi Creek (qc)	Group C	0.00	none	0.00	CL	0.066	*Type F*	J
					ML	0.039	*Type F*	A
					SM-ML	0.034	*Type F*	B&I/A
					CL	0.026	*Type D*	J
					CH	0.026	*Type D*	H
					CH	0.032	*Type F*	H
					CH	0.022	*Type D*	H
					SM-ML	0.023	*Type F*	K/A
					CL	0.044	*Type F*	B
					SM	0.017	*Type C*	I
					CH	0.033	*Type D*	G
	Group C				ML	0.024	*Type D*	J
					CH	0.015	*Type D*	G
					CH	0.012	*Type D*	H
					CH	0.016	*Type D*	H
					CH	0.012	*Type D*	J
					CH	0.013	*Type D*	H
					ML	0.034	*Type F*	J
					CH	0.017	*Type D*	F
					CH	0.017	*Type D*	F
Quipolly (qu)	Group D	0.00	none	0.00	SC	0.022	*Type F*	J
	Group C/D				SC	0.023	*Type F*	J
					SC	0.027	*Type F*	B
	Group C				CH	0.016	*Type F*	J
					CH	0.016	*Type D*	H

Table 8 Tamworth Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
					CH	0.017	*Type D*	H
Round Hill (rh)	Group C	0.00	none	0.00	SM	0.034	*Type D*	J
					CL	0.039	*Type D*	K
					SC	0.020	*Type D*	K
					ML	0.033	*Type D*	J
					CL	0.021	*Type D*	B
					CL	0.028	*Type D*	B
	Group D				SC	0.020	*Type F*	J
	Group C				SC	0.021	*Type F*	J
					CH	0.015	*Type D*	G
Spring Creek (sc)	Group C	0.00	none	0.00	OL	0.019	*Type F*	J
					SC	0.030	*Type F*	B
	Group B				ML	0.011	*Type F*	J
	Group D				GM	0.002	*Type F*	J
	Group C/D				SM	0.016	*Type F*	J
					SM	0.014	*Type F*	J
The Siphon (si)	Group C	0.00	none	0.00	GC	0.031	*Type F*	J
					ML	0.050	*Type F*	C
					CH	0.057	*Type F*	C
					CL	>0.086	*Type F*	G
					CH	0.011	*Type D*	J
					CH	0.014	*Type D*	H
					CH	0.017	*Type F*	J
					CH	0.017	*Type D*	H
					CH	0.015	*Type D*	F
					CL	0.031	*Type D*	B
					CL	0.027	*Type F*	G
					OL	0.023	*Type F*	J
					ML	0.035	*Type F*	A
					ML	0.035	*Type F*	A
Slippery Rock (sr)	Group B/C	0.00	none	0.00	SM	0.029	*Type F*	J
					SM	0.030	*Type F*	B&I
	Group D				SM	0.026	*Type C*	J
	Group B/C				SM	0.025	*Type F*	J
					SM	0.029	*Type F*	J
					SM	0.028	*Type D*	J
	Group D				GP-SM	0.033	*Type F*	J
Terrible (te)	Group D	0.00	none	0.00	SM	0.018	*Type F*	J
	Group C				SM	0.028	*Type F*	J
					SM	0.028	*Type F*	B&I
					SM	0.029	*Type C*	J
Thunderbolt's Mountain (th)	Group D	0.00	none	0.00	SM	0.027	*Type F*	J
	Group C				SM-ML	0.017	*Type F*	J
					CL	0.028	*Type F*	H
	Group D				SM	0.043	*Type F*	J
					CH	0.013	*Type D*	J
					CL	0.022	*Type D*	B
					CL	0.020	*Type D*	B
					SC	0.029	*Type F*	J
					CL	0.014	*Type D*	H
Taggarts Mountain (tm)	Group B	0.00	none	0.00	OL	0.026	*Type F*	J
					SM	0.035	*Type F*	B&I
					CL	0.016	*Type D*	G

Table 8 Tamworth Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
	Group C				ML	0.019	*Type F*	J
					CL	0.018	*Type D*	H
	Group B				SM	0.021	*Type F*	J
					SM	0.031	*Type F*	J
					SM	0.029	*Type F*	J
					ML	0.037	*Type F*	A
	Group C/D				SM	0.025	*Type F*	J
					ML	0.044	*Type D*	B
					SC	0.034	*Type F*	J
					ML	0.035	*Type D*	B
Mount Winton (wi)	Group C	0.00	none	0.00	CH	0.011	*Type D*	J
					CH	0.015	*Type D*	H
					CL	0.025	*Type F*	H
					CL	0.045	*Type F*	B
					CL	0.003	*Type F*	J
					CL	0.008	*Type F*	G
	Group D				SM	0.021	*Type F*	J
					SM	0.021	*Type F*	J
	Group C/D				GM	0.031	*Type F*	J
					GC	0.028	*Type F*	B
Wangarang (wn)	Group C	0.00	none	0.00	ML	0.037	*Type D*	J
					SM	0.039	*Type D*	J
					CL	0.038	*Type D*	B
					ML	0.040	*Type F*	J
					ML	0.032	*Type F*	A
					CL	0.028	*Type D*	G
					SC	0.015	*Type F*	J
					ML	0.047	*Type D*	E
					ML	0.071	*Type D*	E
Warral Station (ws)	Group C	0.00	none	0.00	CL	0.028	*Type F*	J
					CL	0.049	*Type F*	C
					CL	0.033	*Type F*	A
					CL	0.036	*Type F*	B
					ML	0.036	*Type D*	J
					CH	0.017	*Type D*	H
					CL	0.032	*Type F*	B
					CL	0.041	*Type F*	B
					CL	0.034	*Type D*	J
					ML	0.056	*Type D*	D
					CH	0.061	*Type F*	C
					CL	0.069	*Type F*	C
					CL	0.030	*Type F*	J
					CL	0.029	*Type F*	B
					SM	0.021	*Type C*	K
					SC-CL	0.017	*Type F*	K/H
					CL	0.025	*Type F*	G
					ML	0.028	*Type F*	J
					OL	0.016	*Type F*	J
					ML	>0.075	*Type F*	K
					CH	0.021	*Type F*	G
					ML	0.025	*Type F*	J
					CL	0.017	*Type F*	H
					CH	0.014	*Type D*	H
					CL	0.017	*Type D*	H
Wyalla Mountain	Group C/D	0.00	none	0.00	SM	0.018	*Type F*	J

Table 8 Tamworth Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
(wy)					CL	0.015	*Type F*	G
	Group D				SM	0.017	*Type F*	J
					CL	0.019	*Type F*	J
					CL	0.017	*Type F*	A
	Group C/D				SM	0.015	*Type F*	J
					SC	0.020	*Type F*	B
					CH	0.013	*Type F*	G
					CL	0.017	*Type F*	G
Yilgarn (yi)	Group B	0.00	none	0.00	SM	0.020	*Type F*	J
					SM	0.022	*Type F*	J
					SM	0.021	*Type F*	J
					SM	0.023	*Type C*	J
					SM	0.027	*Type C*	I
					SM	0.019	*Type C*	I
					SM	0.019	*Type C*	I
					SM	0.023	*Type C*	J
					SM	0.027	*Type C*	I
					SM	0.031	*Type C*	I
Yarramine (yr)	Group B	0.00	none	0.00	SM	0.032	*Type F*	J
					SM	0.025	*Type C*	J
					SM	0.032	*Type F*	I
					SC	0.013	*Type F*	B
					SM	0.030	*Type F*	J

* Low risk, ot
no risk

Table 9 Kempsey-Korogoro Point

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Austral Eden (ae)	Group C	endemic	MH	>0.053	*Type F*	I
			MH	0.056	*Type D*	B
	Group B		MH	>0.054	*Type F*	B
			MH	0.060	*Type D*	B
Aldavilla (al)	Group B/C	sporadic	MH	0.053	*Type D*	B
			MH	0.059	*Type D*	D
	Group B/C		CL	0.023	*Type D*	A
			CL	0.033	*Type D*	B
			SC	0.034	*Type D*	B
			MH-CL	0.049	*Type D*	D
Beranghi (be)	Group C/D	sporadic	ML	0.032	*Type F*	B
			CL	0.023	*Type D*	B
			CL	>0.081	*Type F*	C
			CL	>0.087	*Type F*	C
			CL	0.073	*Type F*	C
			CL	>0.084	*Type F*	C
	Group C		MH	0.054	*Type D*	B
			CL	0.075	*Type F*	C
Belgrave Falls (bf)	Group A/B	sporadic	MH	>0.059	*Type F*	I
			MH	0.047	*Type F*	I
	Group A		SP	0.019	*Type F*	J
			CL	0.036	*Type F*	D
			SP	0.007	*Type C*	J
			SC	0.010	*Type F*	I
Belmore (bl)	Group D	emdemic	ML	Peaty	*Type F*	C
	Group C/D		CL	>0.044	*Type F*	C
			MH	0.057	*Type F*	nt
Blackmans Point (bp)	inapplicable	endemic	CL	Peaty	*Type F*	B
			CL	0.038	*Type F*	nt
			CL	0.063	*Type F*	nt
			CL	0.033	*Type F*	nt
Beechwood (bw)	Group B/C	none	MH	0.042	*Type F*	A
			MH	0.038	*Type F*	A
			CL	0.031	*Type F*	A
			CL-CH	0.068	*Type F*	C
			CL-CH	0.078	*Type F*	C
			CL	0.038	*Type D*	D
			CL	>0.086	*Type F*	C
			CL	>0.086	*Type F*	C
Belangry (by)	Group C/D	none	SW	0.025	*Type F*	I
			SC	0.028	*Type F*	I
			SC	0.021	*Type F*	B
			ML	0.010	*Type F*	C
			CL	0.016	*Type F*	A
			CL	0.028	*Type F*	A
	Group C		SC	0.022	*Type F*	B
			SC	0.030	*Type F*	B
			CL	>0.083	*Type F*	C
Cairncross (ca)	Group C/D	common		0.047	*Type F*	nt
					Type F	nt
					Type D	nt
	Group D		CL	Peaty	*Type F*	B

Table 9 Kempsey-Korogoro Point

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
			CL	0.047	*Type D*	D
			CL	0.031	*Type D*	D
			CH	0.022	*Type D*	nt
	Group C/D		CL	0.029	*Type D*	A
			CL	0.038	*Type D*	A
			CL	>0.098	*Type F*	C
Connection Creek (cc)	inapplicable	endemic	ML	Peaty	*Type F*	A
			MH	Peaty	*Type F*	I
			CL	Peaty	*Type F*	C
			ML	Peaty	*Type F*	A
			CL	0.036	*Type D*	A
Crescent Head (ch)	Group B/C	sporadic	ML	0.031	*Type F*	I
			ML	0.029	*Type F*	A
			CL	0.024	*Type D*	B
			SC	0.030	*Type F*	B
			SC-CL	0.042	*Type D*	D
	Group C		SC-CL	0.040	*Type D*	B
			SM	0.031	*Type F*	J
			SM	0.043	*Type D*	nt
Christmas Creek (ck)	Group C	endemic	MH	0.042	*Type D*	A
			MH	0.045	*Type D*	B
			CL	Peaty	*Type F*	C
			MH	Peaty	*Type D*	I
	Group C/D		MH	0.080	*Type F*	C
			CH		*Type F*	A
			CH		*Type D*	B
			CH		*Type D*	B
			CH		*Type D*	B
			CH		*Type D*	B
			CH		*Type D*	B
			CH		*Type D*	A
			CH		*Type F*	C
Combatine (co)	Group C/D	none	SC	0.033	*Type D*	B
			ML	0.036	*Type F*	B
			MH	0.058	*Type D*	I
			MH-CL	0.037	*Type D*	D
Cooperabung (cp)	Group B/C	none	SM	0.046	*Type F*	J
			SM	0.040	*Type D*	J
			SM	0.027	*Type F*	J
			ML	0.027	*Type F*	A
			CL	0.035	*Type D*	B
			CL	0.024	*Type D*	A
			CL	0.040	*Type F*	B
			MH	>0.040	*Type D*	B
			MH	0.046	*Type D*	nt
			CL	0.050	*Type D*	D
Red Hill (rh)	Group B/C	none	CL	0.010	*Type F*	C
			CL	0.063	*Type F*	C
			CH	0.058	*Type F*	C
			CL	>0.039	*Type F*	C
			CL	Peaty	*Type F*	C
Delicate (de)	Group B	endemic	ML	Peaty	*Type F*	I
			CL	0.035	*Type D*	B

Table 9 Kempsey-Korogoro Point

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
			SC	0.042	*Type F*	B
Euroka (eu)	Group C	sporadic	CL	0.037	*Type D*	D
			CH	0.011	*Type F*	C
Five Ways (fw)	Group B	none	CL	0.020	*Type F*	C
			CL	>0.067	*Type F*	C
			MH	>0.044	*Type D*	B
			CL	>0.086	*Type F*	C
	Group C		ML	0.027	*Type F*	I
			MH	0.041	*Type D*	B
			CL	0.012	*Type D*	A
	Group D		MH	0.031	*Type D*	A
			SM	0.058	*Type D*	J
Gladstone (gd)	Group B	endemic	MH	0.072	*Type D*	D
	Group D		MH	>0.051	*Type D*	A
			CL	0.052	*Type F*	C
			CL	0.046	*Type D*	D
			SC	0.036	*Type F*	C
			MH-CL	>0.062	*Type F*	C
			SC	0.033	*Type C*	I
Gearys Mountain (gm)	Group D	none	ML-CL	0.029	*Type F*	B
			MH	0.051	*Type D*	nt
	Group B/C		ML	0.043	*Type F*	A
			CL	0.061	*Type D*	B
			CL	0.030	*Type D*	A
			ML	Peaty	*Type F*	A
			ML-CL	0.019	*Type F*	B
			CL	0.019	*Type F*	A
Goolwah (go)	Group A	sporadic	SP	0.010	*Type F*	I
			SP	0.006	*Type C*	J
Hat Head (hh)	inapplicable	sporadic	SW	0.022	*Type C*	I
			SW	0.022	*Type C*	I
			SW	0.016	*Type F*	I
			SW	0.026	*Type C*	I
			PT	Peaty	*Type F*	J
			SW	0.030	*Type F*	I
Huntingdon (hn)	Group B	sporadic	MH	0.034	*Type F*	A
			MH-CL	0.048	*Type D*	D
	Group C		CL	0.042	*Type D*	B
			CL	0.037	*Type D*	D
			MH	0.044	*Type F*	K
Hursley (hy)	Group C	sporadic	MH	0.037	*Type F*	A
			CL	0.042	*Type F*	B
			CL	>0.081	*Type F*	C
			CL-CH	>0.085	*Type F*	C
			CL	0.078	*Type F*	C
Kundabung (kg)	Group D	sporadic		0.041	*Type F*	nt
					Type D	nt
				0.033	*Type F*	nt
					Type D	nt
					Type D	nt
	Group C			0.044	*Type F*	nt

Table 9 Kempsey-Korogoro Point

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					Type D	nt
					Type D	nt
			MH	0.046	*Type F*	A
			CL	0.017	*Type F*	C
			CL	>0.094	*Type F*	C
Killick (ki)	Group A	sporadic	SP	0.003	*Type C*	J
			SP	0.005	*Type C*	J
			SP	0.031	*Type C*	J
			SP	0.006	*Type C*	I
Kogo (ko)	Group C/D	none	ML	0.015	*Type F*	A
			SC	0.035	*Type D*	B
Korogoro (kr)	Group A	common	SW	0.005	*Type F*	J
			SP	0.009	*Type C*	I
			SP	0.016	*Type F*	I
			SP	0.011	*Type C*	I
			SM	0.026	*Type F*	I
Long Flat (lf)	Group B/C	sporadic	SC	0.026	*Type F*	B
			ML	0.035	*Type F*	B
			MH-CL	0.033	*Type D*	B
			SP	0.013	*Type F*	J
Limeburners (li)	Group A/B	sporadic	SP	0.024	*Type F*	J
			SC	0.032	*Type F*	I
			SC	0.025	*Type F*	I
			SP	0.022	*Type F*	J
			SP	0.023	*Type F*	J
McGuires Crossing (mc)	inapplicable	endemic	PT	Peaty	*Type F*	J
			SP	0.014	*Type C*	I
						nt
Marlo Merrican (mm)	Group B	none	MH	Peaty	*Type F*	I
			CH	>0.089	*Type F*	C
	Group C		MH	0.040	*Type F*	A
			CL	0.037	*Type F*	B
			SC	0.021	*Type F*	B
			ML-CL	0.045	*Type D*	D
			CL	0.025	*Type D*	G
			MH	>0.057	*Type D*	A
			CH	>0.071	*Type F*	C
Moripo (mo)	Group C/D	none	MH	0.053	*Type F*	B
			CL	0.035	*Type F*	A
			CL	0.025	*Type D*	B
			CL	0.033	*Type D*	B
Maria River (mr)	Group D	endemic	MH	0.036	*Type D*	A
			CL	0.048	*Type D*	D
			CL	0.052	*Type D*	B
				0.053	*Type F*	nt
					Type D	nt
	Group D			0.049	*Type F*	nt
					Type F	nt
				0.041	*Type F*	nt
	Group D				*Type D*	nt
					Type D	nt

Table 9 Kempsey-Korogoro Point

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
				0.018	*Type F*	nt
					Type D	nt
				0.035	*Type F*	nt
					Type F	nt
				Peaty	*Type F*	nt
					Type D	nt
					Type D	nt
				Peaty	*Type F*	nt
					Type C	nt
North Shore (ns)	Group A	widespread	SP	0.004	*Type C*	I
			SP	0.000	*Type C*	I
			SP	0.002	*Type C*	I
			SP	0.000	*Type C*	I
O'Connors (oc)	Group D	sporadic	SW	0.015	*Type F*	J
			SP	0.009	*Type F*	I
	Group A		SP	0.010	*Type F*	I
			SP	0.008	*Type C*	I
Pipers Creek (pc)	Group B/C	common	MH	0.047	*Type D*	B
			MH	>0.078	*Type D*	D
			CL	0.033	*Type D*	A
			CH	>0.092	*Type F*	C
			CL	0.033	*Type D*	A
			CL	0.032	*Type D*	B
Plomer Road (pr)	Group A	endemic	SC	0.016	*Type F*	I
			SP	0.015	*Type F*	I
			SP	0.014	*Type F*	I
			SP	0.009	*Type C*	I
Redbank (rb)	Group B	none	ML	0.012	*Type F*	C
			CL	0.044	*Type F*	B
			CL	0.059	*Type F*	C
			CL	0.043	*Type F*	C
			CL	>0.080	*Type F*	C
	Group B		CL	0.014	*Type F*	C
			CL	0.064	*Type F*	G
Rocks Ferry (rf)	Group C	common	MH	0.044	*Type F*	A
			CL	0.045	*Type D*	B
Snowy Road (sr)	Group C/D	none	SC-CL	0.023	*Type F*	B/A
			SC-CL	0.022	*Type F*	B/A
	Group D		SC	0.013	*Type F*	C
	Group C		SP	0.041	*Type F*	I
			SP	0.042	*Type F*	J
			CL	0.027	*Type F*	A
	Group D		ML-SC	0.010	*Type F*	B
			SC-CL	0.019	*Type F*	B/A
			CL	0.058	*Type F*	C
Thrumster (th)	Group C	sporadic	MH	0.009	*Type F*	C
			MH	0.032	*Type D*	A
			CH	0.040	*Type F*	C
			CL	0.063	*Type F*	C
			CL	0.041	*Type F*	B
			CH	0.046	*Type F*	C

Table 9 Kempsey-Korogoro Point

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Tinebank (ti)	Group B	none	SC	0.026	*Type F*	B
			CL	0.082	*Type F*	C
			SC	0.018	*Type F*	C
			SC	0.035	*Type F*	C
	Group C		SC	0.028	*Type F*	C
			SC	0.036	*Type F*	B
Torrens (to)	Group C/D	widespread	SC	0.011	*Type F*	B
			SC	0.007	*Type F*	C
			SP	0.020	*Type C*	J
Disturbed terrain (xx)	Group A		SP	0.006	*Type C*	nt
			SP	0.002	*Type C*	I
Yessabah (ye)	Group C/D	none	ML	Peaty	*Type F*	A
			CL	0.039	*Type F*	B
			CL	0.021	*Type D*	G
			CL	0.018	*Type D*	A
			SC	0.030	*Type F*	B
	Group C		CL	0.020	*Type D*	A
			CL	0.017	*Type F*	A

Table C10 Blackville Soil Landcapes

Soil landscape	Slope range (%)	Soil hydrologic group	Acid Sulfate Risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Ant Hill (ah)	8 to 32	Group D	none	CH	>0.047	*Type F*	J
		Group C		PT	Peaty	*Type F*	J
				OL	0.020	*Type F*	J
				CL	0.029	*Type F*	J
				OL	0.027	*Type F*	J
				CH	0.024	*Type F*	H
				CH	0.022	*Type F*	H
				CH	0.016	*Type F*	H
				CH	0.024	*Type F*	H
				CH	0.057	*Type F*	H
				CL	0.036	*Type F*	H
				CH	0.014	*Type F*	H
				CH	0.016	*Type F*	H
Bow (bw)	1 to 8	?	none	GC	0.010	*Type F*	K
				CH	0.010	*Type F*	H
				CH	0.014	*Type F*	H
				OL	0.022	*Type C*	J
				OL	Peaty	*Type F*	J
				OH	>0.035	*Type F*	J
				OL	0.020	*Type F*	J
				SC-CL	0.040	*Type F*	J
				OL	0.030	*Type F*	J
				CL	0.036	*Type F*	C
				CL	0.031	*Type F*	G
				CH	0.034	*Type F*	H
				CH	0.066	*Type F*	H
				CH	0.033	*Type F*	H
			none	CH	0.051	*Type F*	H
Coober Bulga (cb)	>33	Group D		PT	Peaty	*Type F*	J
		Group C		OL	0.016	*Type F*	J
				PT	Peaty	*Type F*	J
		Group B/C		PT	Peaty	*Type F*	J
		Group C		OL	Peaty	*Type F*	J
				OL	0.027	*Type F*	J
				ML	>0.066	*Type F*	C
				ML	>0.068	*Type F*	C
				CL	0.042	*Type F*	C
				CH	0.015	*Type F*	H
				CH	0.007	*Type F*	H
				CH	0.036	*Type F*	H
				CH	0.052	*Type F*	H
Conadilly (cd)	<0.5	Group B/C	none	CH	0.059	*Type F*	J
				CH	0.039	*Type F*	J
				CL	0.062	*Type D*	K
				CH	0.018	*Type F*	H
				CH	0.020	*Type F*	H
				CH	0.010	*Type F*	F
				CH	0.012	*Type F*	H
				CH	0.013	*Type F*	H
				CH	0.015	*Type F*	F
		Group B/C		CH	>0.056	*Type F*	J
				CH	0.016	*Type D*	H
				CH	0.026	*Type D*	H
Cranbourne (ce)	1 to 10	Group B/C	none	OL	0.022	*Type F*	J
				PT	Peaty	*Type F*	J
				OL	0.027	*Type F*	J

Table C10 Blackville Soil Landcapes

Soil landscape	Slope range (%)	Soil hydrologic group	Acid Sulfate Risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
				CH	0.033	*Type F*	H
				CL	0.043	*Type F*	G
Campions Hill (ch)	1 to 10	Group C	none	CL	0.038	*Type F*	J
				CH	0.022	*Type F*	H
				CL	0.038	*Type F*	K
				CH	0.059	*Type F*	H
				CL	0.026	*Type D*	H
				OL	0.013	*Type D*	J
				CH	0.033	*Type F*	J
				CH	0.022	*Type F*	H
				CH	0.013	*Type F*	H
				CH	0.012	*Type D*	H
				CH	0.017	*Type D*	H
				CL	0.007	*Type F*	H
				CH	0.016	*Type D*	H
				CH	0.020	*Type D*	H
Claremont Swamp (cs)	<1	Group D	none	OL	Peaty	*#VALUE!*	J
				CL	0.021	*Type F*	C
				CH	0.018	*#VALUE!*	nt
Erin (er)	1 to 8	Group B/C	none	CH	0.037	*Type F*	H
		Group B/C		CH	0.037	*Type F*	H
				CH	0.046	*Type F*	H
				CH	0.051	*Type F*	H
				CH	0.056	*Type F*	H
Galla Gilla (gg)	>33	Group C	none	PT	Peaty	*Type F*	J
				PT	Peaty	*Type F*	J
				PT	Peaty	*Type F*	J
				CL	0.034	*Type F*	H
				CH	0.043	*Type F*	H
				SM	0.047	*Type F*	K
Glen Oak (gk)	2 to 10	Grou p C	none	OL	Peaty	*Type F*	J
				GM	Peaty	*Type F*	J
				OL	0.029	*Type F*	J
				CL	0.016	*Type F*	H
				CL	0.016	*Type F*	H
				CH	0.049	*Type F*	H
				CH	0.056	*Type F*	H
Kindamindi (ki)	1 to 20	Group C/D	none	OL	0.014	*Type F*	J
				PT	Peaty	*Type F*	J
				OL	0.017	*Type F*	J
				OL	Peaty	*Type F*	J
				ML	0.030	*Type F*	A
				CH	0.020	*Type F*	H
				CH	0.017	*Type F*	H
				CL	0.035	*Type F*	H
				CH	0.065	*Type F*	H
				CH	>0.064	*Type F*	H
Lever Gully (lg)	2 to 8	Group C	none	CH	0.043	*Type F*	J
				CH	0.045	*Type F*	H
				CH	0.008	*Type F*	H
				OL	0.023	*Type F*	J
				CH	0.020	*Type D*	H
				CH	0.019	*Type F*	H

Table C10 Blackville Soil Landcapes

Soil landscape	Slope range (%)	Soil hydrologic group	Acid Sulfate Risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
				CH	0.011	*Type F*	H
				CH	0.012	*Type F*	H
				CH	0.047	*Type F*	H
				CH	>0.086	*Type F*	H
		Group B/C		CL	Peaty	*Type F*	J
Lang's Neck (ln	30 to 200	Group C	none	PT	Peaty	*Type F*	J
		Group D		PT	Peaty	*Type F*	J
		Group B/C		OL	0.019	*Type F*	J
		Group C		OL	0.023	*Type F*	J
				SM	0.040	*Type F*	J
				CH	0.044	*Type F*	H
				CL	0.032	*Type F*	H
Lochaber (lo)	<3	Group B	none	OL	0.017	*Type F*	J
				CL	0.020	*Type F*	H
Moan (mn)	10 to 30	Group B/C	none	PT	Peaty	*Type F*	J
		Group C		PT	Peaty	*Type F*	J
				CH	0.037	*Type F*	H
		Group B/C		OL	0.028	*Type F*	J
				OL	0.017	*Type F*	J
				CH	0.048	*Type F*	H
				CH	0.055	*Type F*	H
Mt Tamarang (mt)	30 to 80	Group C	none	SM-OL	0.006	*Type F*	J
				OL	0.020	*Type F*	J
				OL	0.018	*Type F*	J
				CH	0.037	*Type F*	H
				CH	0.021	*Type F*	H
				CH	0.047	*Type F*	H
				SC-CL	0.033	*Type F*	A
				CL	0.043	*Type F*	K
				OL	Peaty	*Type F*	J
Norfolk (no)	<3	Group D	none	SC	Peaty	*#VALUE!*	J
				OL	Peaty	*Type F*	J
				ML	0.043	*Type F*	J
				ML	0.019	*#VALUE!*	J
				ML	0.042	*Type F*	A
				SC	0.022	*Type F*	A
Nany Rock (nr)	50 to 200	Group D	none	SM	Peaty	*Type F*	J
Pigeon Box (pb)	10 to 30	Group D	none	OL	Peaty	*Type F*	J
		Group B		ML	0.044	*Type F*	J
		Group C		OL	Peaty	*Type F*	J
				OL	Peaty	*Type F*	J
				CL	0.014	*Type F*	C
				ML	0.035	*Type F*	A
Phillip's Creek (pc	<3	Group C/D	none	ML	>0.052	*Type F*	J
		Group C		OL	0.041	*Type F*	J
		Group C/D		SC	0.016	*Type F*	J
				CH	0.022	*Type F*	H
				CL	0.021	*Type F*	H
				CH	0.034	*Type D*	H
				CH	0.060	*Type F*	H
				CH	0.057	*Type F*	H
				CH	0.015	*Type F*	H

Table C10 Blackville Soil Landcapes

Soil landscape	Slope range (%)	Soil hydrologic group	Acid Sulfate Risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Trinkey Forest (tf)	<5		none	ML	>0.082	*Type C*	K
		Group B/C		SM	0.016	*Type C*	J
				OL	0.021	*Type F*	J
				SC	0.020	*Type F*	J
				SC	0.021	*Type C*	J
				SC	0.016	*Type F*	I
				SC	0.018	*Type D*	B
				SC	0.024	*Type F*	A
				CL	0.026	*Type C*	G
				CL	0.026	*Type F*	A
				CH	0.009	*Type F*	H
		Group C		SC	0.022	*Type F*	J
		Group D		SC	Peaty	*Type F*	J
				SC	0.019	*Type F*	K
Turkey Range (tu)	2 to 10	Group C	none	SM	0.021	*Type F*	J
		Group B		SC	0.008	*Type F*	J
		Group C/D		SC	Peaty	*Type F*	J
				SC	0.007	*Type C*	I
				SC	0.026	*Type C*	C
				CL	0.023	*Type F*	A
				SC-CL	0.027	*Type F*	C
				CH	0.022	*Type D*	A
Windy Creek (wc)	<3		none	CH	0.053	*Type F*	H
		Group C/D		CH	0.055	*Type F*	H
		Group C		CL	>0.064	*Type F*	K
		Group C/D		CH	0.044	*Type F*	H
				CH	0.048	*Type F*	H
				CH	0.022	*Type D*	H
				CH	0.007	*Type D*	H
				CH	0.015	*Type F*	H
				CH	0.028	*Type D*	H
				CH	0.020	*Type F*	H
				CH	0.014	*Type D*	H
				CH	0.008	*Type F*	H
				CL	0.044	*Type F*	K
				CH	0.021	*Type F*	H
Warung (wg)	1 to 10	Group B/C	none	OL	Peaty	*Type F*	J
		Group B/C		OL	Peaty	*Type F*	J
		Group B		OL	Peaty	*Type F*	J
		Group B/C		SM	Peaty	*Type F*	J
				CL	0.024	*Type F*	C
				CL	0.016	*Type F*	C
				CH	0.015	*Type F*	C
				CL	0.011	*Type F*	C
				SM	0.020	*Type F*	K
				GM	0.036	*Type C*	I
Yarraman (ya)	<1	Group C	none	CH	0.037	*Type F*	H
		Group C/D		CH	0.050	*Type F*	H
				CH	0.020	*Type F*	H
				CH	0.022	*Type F*	F
				CH	0.028	*Type D*	H
				CH	0.028	*Type D*	G&F
Yarramoor (ym)	<3	Group C	none	OL	0.027	*Type F*	J
				SM-ML	0.025	*Type F*	J

Table C10 Blackville Soil Landcapes

Soil landscape	Slope range (%)	Soil hydrologic group	Acid Sulfate Risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
				OL	0.035	*Type F*	J
				CL	0.028	*Type F*	K
				CL	0.026	*Type F*	K
				CL	0.040	*Type F*	K
				CL	0.035	*Type F*	K
				OL	0.015	*Type F*	J
				SC	0.044	*Type F*	K
				CL	0.037	*Type F*	H

Table 11 Murrurundi Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
Ant Hill (ah)	Type C/D	0.00	none	OL	0.026	*Type F*	J
				CH	0.020	*Type D*	H
				SC	0.039	*Type F*	A
	Type C			PT	Peaty	*Type F*	J
				OL	Peaty	*Type F*	J
				CL	0.029	*Type F*	H
				CL	0.029	*Type D*	H
				OL	0.013	*Type D*	J
				CH	0.019	*Type D*	H
				SP-ML	0.029	*Type F*	K
	Type C/D			CH	0.020	*Type D*	J
				CH	0.018	*Type D*	H
				CH	0.018	*Type D*	H
Basin Gully (ba)		0.00	none	SM	0.033	*Type F*	B&I
				ML	0.034	*Type D*	B
				SP-ML	0.031	*Type D*	J/B
	Type C			SC	0.019	*Type F*	J
				SC	0.028	*Type F*	B
				SC	0.020	*Type C*	I
				CL	0.034	*Type F*	G
	Type D			SM	0.014	*Type F*	J
				SM	0.025	*Type F*	B&I
	Type C			OL	0.030	*Type F*	J
				SM	0.034	*Type F*	B&I
	Type C/D			CL	0.022	*Type F*	J
				MH	0.048	*Type F*	H
	Type C/D			CL	0.017	*Type F*	J
				CL	0.022	*Type D*	H
				CL	0.026	*Type F*	H
Borambil Creek (bc)	Type C/D	0.00	none	ML	0.033	*Type F*	J
				ML	0.040	*Type F*	J
				CL	0.028	*Type F*	G
	Type C/D			CL	0.040	*Type F*	J
				CL	0.043	*Type D*	B
	Type C			CH	0.017	*Type D*	J
				CL	0.019	*Type D*	E
	Type B			ML	0.043	*Type F*	J
				SM	0.032	*Type F*	B&I
				SM	0.025	*Type F*	B&I
				SM	0.049	*Type F*	I
	Type C			CL	0.035	*Type F*	J
				ML	0.034	*Type F*	K
Braefield (bf)	Type B/C	0.00	none	ML	0.049	*Type D*	J
				SC	0.027	*Type F*	I
				CL	0.032	*Type D*	B
	Type B			SC	0.010	*Type C*	J
				ML	0.052	*Type D*	D
				CL	0.016	*Type D*	B
				SM	0.030	*Type F*	J
				SM	0.027	*Type F*	J
				SM	0.037	*Type F*	B&I
				SP-ML	0.039	*Type F*	J/B
				SM	0.034	*Type F*	J
Burning Mountain (bm)	Type B/C	0.00	none	ML	0.035	*Type F*	J
				SP-ML	0.048	*Type F*	J/B
				CL	0.034	*Type F*	A
				SP-CL	0.035	*Type F*	I/A

Table 11 Murrurundi Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
	Type D			ML	0.037	*Type F*	J
				ML	0.043	*Type D*	B
				CL	0.038	*Type D*	B
	Type C/D			ML	0.035	*Type D*	J
				ML	0.042	*Type D*	D
				CL	0.022	*Type D*	A
	Type D			SM	0.035	*Type F*	J
				SP-ML	0.040	*Type D*	J/B
Bow (bw)	Type C	0.00	none	OL	0.029	*Type F*	J
				CH	0.028	*Type D*	H
				CL	0.034	*Type F*	H
				CH	0.044	*Type F*	H
	Type C/D			CH	0.022	*Type D*	J
				CL	0.023	*Type D*	H
				CL	0.027	*Type D*	H
	Type C/D			OL	0.029	*Type F*	J
				CL	0.033	*Type F*	G
				ML	0.051	*Type F*	A
	Type C			CL	0.031	*Type F*	J
				CL	0.040	*Type F*	K
				CL	0.039	*Type F*	K
	Type C/D			OL	0.022	*Type F*	J
				CL	0.034	*Type F*	G
				CL	0.043	*Type F*	H
				OL	0.021	*Type F*	J
Coober Bulga (cb)	Type C/D	0.00	none	OL	0.018	*Type F*	J
				OL	0.031	*Type F*	J
				SM	0.026	*Type F*	K
	Type C			SP-OL	0.017	*Type F*	J
				CH	0.028	*Type D*	H
	Type C/D			ML	>0.057	*Type F*	J
				ML	0.042	*Type F*	A
	Type B/C			PT	Peaty	*Type F*	J
				ML	0.031	*Type F*	A
Currabubula Creek (cc)	Type B	0.00	none	ML	0.043	*Type F*	J
				SP-CL	0.054	*Type F*	I/C
				SC	0.037	*Type F*	A
	Type C/D			SM	0.036	*Type F*	J
				ML	0.045	*Type D*	A
	Type C			PT	Peaty	*Type F*	J
				CL	0.021	*Type D*	H
				CL	0.020	*Type F*	H
	Type B			ML	0.037	*Type F*	J
				SP-CL	0.034	*Type F*	I/C
				SM	0.041	*Type F*	I
				ML	0.031	*Type F*	J
				ML	0.044	*Type F*	A
				ML	0.042	*Type F*	A
Conadilly (cd)	Type C/D	0.00	none	CH	0.018	*Type D*	J
				CH	0.019	*Type D*	F
	Type B/C			OL	0.018	*Type D*	J
				CH	0.020	*Type D*	F
Cressfield Road (cf)	Type B/C	0.00	none	GM	0.033	*Type C*	J
				SM	0.044	*Type C*	J
				CL	0.021	*Type F*	A
	Type C/D			SM	0.034	*Type F*	J

Table 11 Murrurundi Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
				CL	0.022	*Type D*	G
				CL	0.021	*Type D*	G
	Type C/D			SM	0.042	*Type F*	J
				SP-CL	0.024	*Type D*	K/G
	Type B			SP-ML	0.042	*Type F*	J
				SM	0.052	*Type F*	J
				CL	0.033	*Type D*	D
				SM	0.024	*Type F*	J
				SM	0.046	*Type F*	J
	Type B/C			SM	0.037	*Type F*	J
				SM	0.041	*Type F*	I
				CL	0.028	*Type D*	B
Donalds Gully (dn)	Type B	0.00	none	SM	0.039	*Type F*	J
				SP-ML	0.060	*Type D*	J/E
				ML	0.084	*Type F*	C
	Type B/C			SM	0.043	*Type F*	J
				SM	0.052	*Type F*	J
				GC	0.022	*Type F*	B
	Type D			ML	0.056	*Type F*	J
				MH	0.065	*Type D*	B
				CH	0.025	*Type D*	G
Dunover (do)	Type C	0.00	none	CL	0.019	*Type F*	J
				CH	0.021	*Type D*	H
				CH	0.021	*Type D*	H
				OL	0.024	*Type D*	J
				CL	0.023	*Type D*	H
				CL	0.021	*Type D*	H
Dunwell (dw)	Type D	0.00	none	ML	0.032	*Type F*	J
				SM	0.031	*Type F*	B&I
	Type C/D			SM	0.034	*Type F*	J
				ML	0.034	*Type F*	A
				CL	0.037	*Type D*	B
	Type C/D			SM	0.045	*Type F*	J
				CL	0.026	*Type D*	D
	Type B			SM	0.026	*Type F*	J
				GC	0.033	*Type C*	I
				SM	0.032	*Type D*	J
				GW-SM	0.030	*Type C*	J
				SM	0.050	*Type F*	J
Galla Gilla (gg)	Type C/D	0.00	none	OL	0.033	*Type F*	J
				CL	0.029	*Type F*	H
				SM	0.050	*Type F*	I
				CL	0.028	*Type F*	H
	Type C			OL	0.029	*Type F*	J
				CL	0.033	*Type F*	G
				SM	0.041	*Type F*	K
	Type C/D			OL	0.020	*Type D*	J
				CH	0.018	*Type D*	H
Girds Hill (gh)	Type C/D	0.00	none	OL	0.021	*Type F*	J
				CH	0.026	*Type D*	G
				ML	0.034	*Type F*	J
				CL	0.027	*Type D*	A
				OL	Peaty	*Type F*	J
				ML	0.038	*Type F*	A
				SM	0.035	*Type F*	B&I

Table 11 Murrurundi Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Glen Oak (gk)	Type C/D	0.00	none	PT	Peaty	*Type F*	J
				OL	0.020	*Type D*	J
				CL	0.021	*Type D*	H
				CL	0.018	*Type D*	H
				OL	0.017	*Type F*	J
				SP-ML	0.028	*Type F*	K
				CL	0.020	*Type D*	J
				CL	0.025	*Type F*	H
				CL	0.026	*Type F*	H
Goscombes Road (go)	Group B	0.00	none	SM	0.025	*Type F*	J
				SM	0.031	*Type F*	B&I
				SM	0.023	*Type F*	B&I
				OL	0.020	*Type F*	J
				CL	0.086	*Type F*	H
				SP-CL	0.073	*Type F*	I/C
	Group C			OL	0.019	*Type D*	J
				CL	0.026	*Type D*	H
				CL	0.018	*Type D*	H
Gaspard Road (gr)	Group C	0.00	none	ML	0.039	*Type F*	J
				ML	0.041	*Type D*	A
				CL	0.030	*Type D*	H
	Group C/D			ML	0.040	*Type F*	J
				CL	0.018	*Type D*	H
	Group C			CH	0.022	*Type F*	J
				CL	0.024	*Type D*	H
				ML	0.027	*Type D*	K
Gateleys Mountain (gt)	Group C/D	0.00	none	OL	0.043	*Type F*	J
				SP-ML	0.029	*Type F*	J
				CL	0.038	*Type F*	G
				GP-SM	0.040	*Type F*	J
				GP-SM	0.041	*Type F*	I/B&I
	Group C			ML	0.033	*Type F*	J
				ML	0.047	*Type F*	A
	Group D			ML	0.016	*Type F*	J
Kangaroo Ridge (ka)	Group C/D	0.00	none	SM	0.027	*Type F*	J
				SC	0.022	*Type F*	B
	Group B/C			ML	0.033	*Type F*	J
	Group B			SM	0.028	*Type F*	J
				SM	0.036	*Type F*	B&I
	Group C			ML	0.032	*Type F*	J
				CL	0.024	*Type D*	G
	Group C/D			OL	0.019	*Type F*	J
				CH	0.030	*Type F*	H
				CH	0.033	*Type F*	H
	Group C			SC	0.024	*Type F*	J
				SC	0.029	*Type F*	B
				SC	0.026	*Type F*	B
	Group B/C			SM	0.039	*Type F*	J
				SM	0.039	*Type F*	J
				SM	0.039	*Type F*	J
Kingdon Ponds (kp)	Group C	0.00	none	SM	0.016	*Type F*	J
				SM	0.035	*Type F*	B&I
				ML	0.049	*Type F*	A
	Group C			SM	0.000	*Type C*	J
				SP-SM	0.038	*Type F*	J
				CL	0.030	*Type F*	G

Table 11 Murrurundi Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
	Group C/D			OL	0.032	*Type F*	J
				ML	0.040	*Type D*	A
				CL	0.026	*Type D*	H
Lever Gully (lg)	Group B/C	0.00	none	SP-OL	0.022	*Type F*	J
				CL	0.040	*Type F*	H
				CL	0.024	*Type F*	J
				CH	0.018	*Type D*	H
				CL	0.025	*Type F*	H
	Group C			CH	0.019	*Type D*	J
				CL	0.017	*Type F*	H
				CL	0.021	*Type D*	H
	Group B			OL	0.022	*Type F*	J
				SC	0.038	*Type F*	K
				CH	0.037	*Type F*	H
				CH	0.047	*Type F*	H
Langs Neck (ln)	Group D	0.00	none	OL	0.029	*Type F*	J
				ML	0.034	*Type F*	A
	Group C/D			PT	Peaty	*Type F*	J
				CL	0.024	*Type D*	H
				CH	0.019	*Type D*	H
	Group C			PT	Peaty	*Type F*	J
				ML	0.044	*Type F*	A
				SM	0.028	*Type F*	J
				SC	0.026	*Type F*	K
Moan (mn)	Type D	0.00	none	OL	0.023	*Type F*	J
				CL	0.033	*Type F*	G
	Type C/D			OL	Peaty	*Type F*	J
				CL	0.033	*Type F*	H
				ML	0.044	*Type F*	A
	Type C			OL	0.019	*Type F*	J
				CL	0.028	*Type D*	H
				CL	0.020	*Type F*	H
	Type C/D			CL	0.027	*Type F*	J
Miranee Road (mr)	Group B	0.00	none	SM	0.039	*Type F*	J
				SM	0.050	*Type F*	J
				CL	0.031	*Type D*	B
	Group C			OL	0.026	*Type F*	J
				SC	0.036	*Type F*	C
				SC	0.031	*Type F*	B
	Group D			SM	0.021	*Type F*	J
				GP-SM	0.034	*Type C*	I
	Group C/D			ML	0.038	*Type F*	J
				ML	0.045	*Type F*	A
				CH	0.027	*Type D*	G
	Group D			SM	0.025	*Type F*	J
				SC	0.034	*Type D*	B
	Group C/D			SC	0.021	*Type F*	J
				GP-SC	0.031	*Type F*	K/A
				SC	0.034	*Type F*	A
Phillips Creek (pc)	Group C	0.00	none	OL	0.023	*Type F*	J
				CL	0.037	*Type F*	G
				CL	0.035	*Type F*	H
				CL	0.032	*Type F*	G
				CH	0.030	*Type F*	H
				SC	0.031	*Type F*	J
				ML	0.034	*Type F*	K

Table 11 Murrurundi Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
				CL	0.030	*Type F*	H
				SC	0.024	*Type F*	J
				CL	0.034	*Type F*	H
				ML	0.040	*Type F*	K
Parnell (pl)	Group C/D	0.00	none	ML	0.040	*Type D*	B
Pages River (pr)	Group B	0.00	none	ML	0.050	*Type F*	J
				ML	0.052	*Type F*	J
				ML	0.056	*Type F*	C
				ML	0.052	*Type F*	J
				ML	0.059	*Type F*	A
	Group C			ML	0.043	*Type F*	J
				SM	0.036	*Type F*	I
				ML	0.043	*Type F*	A
	Group C			ML	0.036	*Type F*	J
				ML	0.053	*Type F*	A
				CL	0.048	*Type F*	H
	Group C			OL	0.039	*Type F*	J
				CL	0.038	*Type D*	G
Parkville (pv)	Group B	0.00	none	ML	0.041	*Type F*	J
				ML	0.049	*Type F*	A
				CL	0.016	*Type D*	H
	Group B/C			ML	0.034	*Type F*	J
				ML	0.038	*Type F*	C
				CL	0.024	*Type D*	B
	Group C/D			ML	0.032	*Type F*	J
				SP-ML	0.039	*Type F*	I/A
	Group B			SP-ML	0.043	*Type F*	J
				SM	0.023	*Type F*	I
	Group B/C			ML	0.036	*Type F*	J
				SM	0.055	*Type F*	J
				CL	0.031	*Type D*	B
Quirindi Creek (qc)	Group C	0.00	none	ML	0.039	*Type F*	A
				ML	0.043	*Type F*	A
				CL	0.022	*Type D*	H
				CL	0.041	*Type F*	B
Quipolly (qu)		0.00	none	SC	0.027	*Type F*	B
				CL	0.021	*Type D*	H
	Group D			ML	0.042	*Type F*	J
				SM	0.027	*Type F*	J
				PT	Peaty	*Type F*	J
				SM	0.036	*Type D*	J
	Group C			OL	0.020	*Type D*	J
				CL	0.029	*Type F*	H
Round Hill (rh)	Group C/D	0.00	none	SM	0.033	*Type D*	J
				CL	0.024	*Type D*	B
				OL	0.038	*Type F*	J
				ML	0.045	*Type F*	A
				CH	0.019	*Type D*	H
	Group D			OL	0.018	*Type D*	J
				ML	0.035	*Type D*	B
				ML	0.039	*Type D*	E
				CL	0.022	*Type D*	G
	Group D			OL	0.021	*Type F*	J
				ML	0.045	*Type D*	B
				CL	0.024	*Type D*	B

Table 11 Murrurundi Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
				OL	0.022	*Type F*	J
				CL	0.041	*Type F*	B
				PT	Peaty	*Type F*	J
				ML	0.033	*Type F*	A
	Group C/D			PT	Peaty	*Type F*	J
				ML	0.049	*Type F*	A
Stafford Gap (sg)	Group C	0.00	none	SM	0.025	*Type F*	J
				SM	0.022	*Type F*	I
				SP-ML	0.026	*Type F*	J
				SM	0.034	*Type C*	J
				SM	0.027	*Type F*	I
	Group B			SM	0.014	*Type F*	J
				SM	0.023	*Type F*	B&I
	Group C			GM	0.026	*Type F*	J
				GP-SM	0.037	*Type F*	I
				SM	0.031	*Type F*	J
				SM	0.029	*Type F*	I
				SM	0.023	*Type F*	J
				SC	0.028	*Type F*	B
				SM	0.037	*Type F*	I
Sylphs Mountain (sm)	Group C/D	0.00	none	ML	0.032	*Type F*	J
				CL	0.029	*Type F*	G
				ML	0.037	*Type F*	J
				CL	0.033	*Type F*	G
	Group C			OL	0.025	*Type F*	J
				CL	0.038	*Type F*	G
				ML	0.049	*Type F*	A
	Group B/C			CH	0.039	*Type F*	J
				CH	0.045	*Type F*	H
				SP-ML	0.033	*Type F*	K/A
				SM	Peaty	*Type F*	J
Scotts Creek Road (so)	Group C/D	0.00	none	OL	0.017	*Type F*	J
				CH	0.022	*Type D*	H
				CH	0.026	*Type D*	H
	Group C/D			OL	0.023	*Type F*	J
				CL	0.029	*Type F*	G
				CL	0.032	*Type F*	G
	Group B/C			OL	0.024	*Type F*	J
				CH	0.044	*Type F*	H
				SC	0.023	*Type F*	A
				SM	0.013	*Type F*	J
				SM	0.039	*Type F*	J
Slippery Rock (sr)	Group C/D	0.00	none	OL	0.034	*Type F*	J
				ML	0.061	*Type D*	I
				ML	0.059	*Type D*	B
	Group D			SM	0.041	*Type F*	J
				CH	0.019	*Type D*	H
	Group C/D			SM	0.029	*Type F*	J
				SM	0.023	*Type F*	I
				SC	0.022	*Type F*	B
				SM	0.041	*Type F*	J
				CL	0.026	*Type F*	G
				CL	0.026	*Type F*	G
				OL	0.019	*Type F*	J
				CL	0.029	*Type F*	A
				CH	0.018	*Type D*	H

Table 11 Murrurundi Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Thompsons Creek (tc)	Group B	0.00	none	ML	0.032	*Type F*	J
				ML	0.038	*Type F*	A
	Group B/C			CL	0.024	*Type D*	J
				CL	0.035	*Type F*	B
	Group B			OL	0.042	*Type F*	J
				ML	0.049	*Type F*	A
	Group B/C			SM	0.035	*Type F*	J
				CH	0.029	*Type F*	H
				CL	0.031	*Type F*	H
Tinagroo (tg)	Group D	0.00	none	SM	0.021	*Type F*	J
				GC	0.039	*Type C*	I
				GW-SM	0.019	*Type C*	J
	Group B			SM	0.020	*Type F*	J
				SM	0.033	*Type F*	I
Thunderbolts Mountain (th)		0.00	none	SM	0.040	*Type F*	B&I
				SP-ML	0.046	*Type F*	J/B
	Group C			OL	0.022	*Type F*	J
				CL	0.039	*Type D*	B
				CH	0.025	*Type D*	G
	Group C/D			SM	0.016	*Type C*	J
				SM	0.022	*Type F*	J
				CH	0.022	*Type D*	D
				CH	0.024	*Type D*	D
	Group B/C			SM	0.037	*Type F*	J
				SM	0.038	*Type F*	J
	Group B			SM	0.029	*Type F*	J
				SM	0.024	*Type F*	B&I
				SC	0.040	*Type F*	B
				CL	0.022	*Type D*	G
	Group C/D			SM	0.024	*Type F*	J
				SM	0.036	*Type F*	J
Windy Creek (wc)	Group C/D	0.00	none	CH	0.017	*Type D*	J
				CH	0.022	*Type D*	F
				CH	0.022	*Type D*	H&F
	Group C			OL	0.033	*Type F*	J
				CH	0.023	*Type D*	E
	Group B/C			ML	0.040	*Type F*	J
				CH	0.020	*Type D*	H
				CH	>0.091	*Type F*	H
	Group C			OL	0.023	*Type F*	J
				CH	0.022	*Type F*	H
				CH	0.024	*Type F*	H
	Group B			OL	0.024	*Type D*	J
				CH	>0.084	*Type F*	H
				SC	0.033	*Type F*	K
Warrah (wh)	Group C	0.00	none	CL	0.019	*Type F*	J
				CH	0.023	*Type F*	H
				CL	0.023	*Type F*	J
				CH	0.019	*Type D*	H
				CH	0.020	*Type F*	H
				ML	0.021	*Type F*	J
				CL	0.024	*Type F*	H
				CL	0.046	*Type F*	H
Wangarang (wn)	Group C	0.00	none	OL	0.027	*Type F*	J
				ML	0.044	*Type F*	A
				ML	0.044	*Type F*	A

Table 11 Murrurundi Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
	Group C/D			ML	0.039	*Type F*	J
				CL	0.034	*Type F*	A
				CL	0.034	*Type F*	J
				SP-CL	0.033	*Type F*	I/A
				CL	0.036	*Type F*	G
Willow Tree (wt)	Group C/D	0.00	none	CL	0.022	*Type F*	J
				CH	0.019	*Type F*	H
	Group B			SM	0.027	*Type F*	J
				ML	0.042	*Type D*	B
	Group D			ML	0.007	*Type F*	J
	Group C/D			OL	0.019	*Type F*	J
				CL	0.023	*Type D*	H
Wingen Maid (wx)	Group D	0.00	none	SP-OL	0.012	*Type F*	J
				SM	0.012	*Type F*	J
				SM	0.027	*Type C*	I
				SM	0.035	*Type C*	I
				SM	0.014	*Type F*	J
				SM	0.027	*Type F*	J
				GP-SM	0.039	*Type C*	J
Springvale (sp)	Group C/D	0.00	none	OL	0.013	*Type F*	J
				CH	0.019	*Type F*	H
				CL	0.036	*Type F*	G
	Group D			GP-SM	0.044	*Type F*	J
				GP-SM	0.049	*Type F*	nt
	Group C			ML	0.046	*Type D*	J
				CH	0.030	*Type D*	F
	Group D			ML	0.044	*Type F*	J
				PT	Peaty	*Type F*	J
				SM	0.033	*Type F*	B&I
Yarramoor (ym)	Group C	0.00	none	ML	0.033	*Type F*	J
				CL	0.028	*Type F*	J
				OL	0.026	*Type F*	J
				CL	0.034	*Type F*	G
				CL	0.034	*Type F*	K
				CH	0.032	*Type F*	H
				CL	0.039	*Type F*	H
	Group C/D			CL	0.028	*Type F*	J
				GC	0.029	*Type C*	J
				SP-CL	0.031	*Type F*	J

Table 12 Dungog Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
Bonnington (bn)	Group B/C	none	ML	0.036	*Type F*	J
			ML	0.039	*Type F*	A
	Group D		ML	0.034	*Type F*	A
			CH	0.029	*Type D*	A
Barrington River (ba)	Group B	none	OL	0.031	*Type F*	J
			ML	0.043	*Type F*	A
	Group B/C		OL	0.018	*Type F*	J
			ML	0.048	*Type F*	A
	Group B		SM	0.035	*Type F*	I
			SM	0.038	*Type F*	I
Black Camp Creek (bc)	Group C	none	ML	0.053	*Type D*	J
			SM-ML	0.063	*Type D*	J/E
			CL	0.049	*Type D*	D
Berrico (bo)	Group B	none	OL	0.023	*Type F*	J
			GM	0.047	*Type F*	B&I
			ML	0.049	*Type D*	B
			ML	0.051	*Type D*	B
	Group B		ML	>0.048	*Type F*	J
			ML	0.051	*Type F*	A
	Group B/C		OL	0.041	*Type F*	J
			ML	0.059	*Type D*	B
			CL	0.033	*Type D*	B
	Group B/C		OL	0.025	*Type F*	J
			ML	0.039	*Type D*	A
			CL	0.020	*Type D*	A
			CL	0.019	*Type D*	A
Bucketts Road (bu)	Group B/C	none	OL	0.045	*Type F*	J
			ML	0.062	*Type D*	D
			CH	0.026	*Type D*	G
			GC	0.040	*Type D*	D
	Group B/C		ML	0.046	*Type F*	J
			ML	0.060	*Type F*	I
			CL	0.035	*Type D*	B
	Group C		ML	0.056	*Type F*	I
			ML	0.060	*Type F*	A
			CL	0.032	*Type D*	B
	Group C		OL	0.029	*Type F*	J
			CL	0.023	*Type D*	H
			SC	0.015	*Type D*	nt
Cockadilly Ridge (cd)		none	ML	0.038	*Type F*	J
	Group C/D		SM	0.048	*Type D*	J
	Group B		OL	0.025	*Type F*	J
			ML	0.036	*Type F*	A
			CL	0.040	*Type D*	A
			CL	0.031	*Type D*	B
	Group C		SM-ML	0.031	*Type F*	J
			SM	0.043	*Type D*	J
	Group C		ML	0.038	*Type F*	A
			CH	0.027	*Type D*	G
Chichester (ci)	Group B	none	PT	Peaty	*Type F*	J
			CL	>0.072	*Type F*	C
	Group B		OL	0.031	*Type F*	J
			ML	0.036	*Type F*	A

Table 12 Dungog Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
			ML	0.046	*Type F*	B
	Group B/C		ML	0.031	*Type F*	A
			ML	0.040	*Type F*	A
			SM-ML	0.023	*Type F*	B&I/A
			SM	0.043	*Type F*	J
	Group B/C		OL	Peaty	*Type F*	J
			CL	0.029	*Type F*	G
			CL	0.064	*Type F*	C
	Group C		CL	0.021	*Type F*	A
			CL	0.022	*Type F*	A
			ML	>0.078	*Type F*	C
			ML	>0.087	*Type F*	C
			ML	>0.087	*Type F*	C
	Group C		OL	Peaty	*Type F*	J
			OL	0.028	*Type F*	J
			ML	0.031	*Type F*	A
Craven (cn)	Group D	none	SM	0.039	*Type F*	J
			ML	0.064	*Type F*	B
			ML	0.037	*Type D*	B
			CL	0.036	*Type D*	D
Chichester River (cr)	Group C/D	none	ML	0.050	*Type D*	A
			ML	0.052	*Type D*	B
			CL	0.051	*Type D*	D
Dungog (du)	Group D	none	OL	0.027	*Type F*	J
			ML	0.048	*Type D*	D
	Group C/D		SM-ML	0.043	*Type F*	J
			SM	0.056	*Type F*	J
			CL	0.045	*Type D*	D
Gloucester Buckets (gb)	Group B	none	SM-ML	0.037	*Type F*	B&I/A
			SM-ML	0.030	*Type F*	J
			SM-ML	0.043	*Type D*	J/D
			SM	0.037	*Type F*	J
	Group C/D		GM	0.031	*Type F*	B&I
			SM-ML	0.046	*Type F*	J
			ML	0.058	*Type F*	B
			CL	0.042	*Type D*	B
			ML	Peaty	*Type D*	J
			ML	0.048	*Type D*	B
Gresford (gd)	Group C	none	SM	0.044	*Type F*	J
			SM	0.051	*Type F*	J
			CL	0.031	*Type D*	A
	Group D		ML	0.038	*Type F*	J
			SM	0.039	*Type F*	J
Gilmore Hill (gi)	Group C	none	ML	0.039	*Type D*	J
			CL	0.037	*Type F*	B
			CL	0.037	*Type F*	A
Gloucester (go)	Group C/D	none	ML	0.045	*Type F*	J
			ML	0.052	*Type D*	B
			CL	0.029	*Type D*	B
			CH	0.023	*Type D*	G&F
Gloucester River (gu)	Group C/D	none	SM	0.039	*Type F*	J
			SM	0.056	*Type F*	J
			SC	0.035	*Type D*	B

Table 12 Dungog Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
	GroupC		ML	0.044	*Type F*	J
			SM	0.047	*Type D*	J
Gloucester Tops (gp)	Group C	none	PT	Peaty	*Type F*	J
			OL	Peaty	*Type F*	J
			OL	0.012	*Type F*	J
	Group B		OL	0.020	*Type F*	J
			CL	0.052	*Type F*	C
			ML	0.059	*Type F*	C
			ML	0.061	*Type F*	C
	Group C		OL	0.022	*Type F*	J
			CL	0.045	*Type F*	C
			ML	0.059	*Type F*	C
			PT	Peaty	*Type F*	J
			SP	0.019	*Type C*	I
	Group C/D		SM	0.015	*Type F*	I
			ML	0.022	*Type F*	C
			ML	0.079	*Type F*	C
Lame Cow Gully (lc)	Group C	none	ML	0.050	*Type D*	J
			ML	0.055	*Type D*	B
			CH	0.029	*Type D*	G
Linger and Die (ld)	Group B/C	none	OL	0.014	*Type F*	J
			ML	0.045	*Type D*	D
			OL	0.023	*Type F*	J
			SM-ML	0.040	*Type D*	D
	Group C		SM-ML	0.024	*Type F*	J
			SM	0.037	*Type F*	J
			SM	0.029	*Type F*	J
Karuah River (kr)	Group B/C	none	SM	0.050	*Type F*	J
			ML	0.048	*Type F*	I
			ML	0.044	*Type F*	B
			SM	0.036	*Type F*	B&I
	Group C/D		ML	0.051	*Type F*	J
			ML	0.057	*Type D*	A
			CL	0.038	*Type D*	B
Lawlers Range (lr)	Group D	none	ML	0.028	*Type D*	J
			SM-ML	0.031	*Type D*	J/B
Marshdale (ma)	Group C/D	none	ML	0.041	*Type F*	J
			ML	0.066	*Type D*	E
			CL	0.035	*Type D*	D
	Group B		SM	0.021	*Type F*	J
			SM	0.039	*Type D*	J
Lame Cow Gully variant a (lca)	Group C	none	ML	0.051	*Type D*	J
			ML	0.054	*Type D*	B
			CL	0.028	*Type D*	G
	Group D		GM	0.043	*Type F*	J
			ML	0.056	*Type D*	B
			CL	0.041	*Type F*	A
Monkerai (mo)	Group D	none	SM-ML	0.026	*Type F*	J
			ML	0.043	*Type F*	B
	Group D		OL	0.027	*Type F*	J
			ML	0.047	*Type F*	B
			CL	0.033	*Type F*	G

Table 12 Dungog Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
	Group C/D		OL	0.028	*Type F*	J
			OL	0.034	*Type F*	J
			CL	0.021	*Type D*	A
Paterson River (pa)	Group B/C	none	ML	0.045	*Type F*	I
			ML	0.068	*Type F*	C
	Group B		SM	0.041	*Type F*	I
			SM	0.037	*Type F*	I
	Group B		ML	0.035	*Type F*	J
			ML	0.045	*Type F*	A
			ML	0.058	*Type F*	C
Salisbury (sa)	Group C	none	ML	0.050	*Type F*	J
			ML	0.046	*Type D*	A
			ML	0.057	*Type F*	A
	Group B		ML	0.043	*Type F*	J
			ML	0.040	*Type F*	A
Saw Pit Creek (sp)	Group C/D	none	OL	>0.040	*Type F*	J
			ML	>0.070	*Type D*	D
			CL	0.040	*Type D*	E
			CL	0.037	*Type D*	E
	Group C/D		OL	Peaty	*Type F*	J
			ML	0.044	*Type F*	B
			CH	0.021	*Type D*	G
	Group D		OL	0.017	*Type F*	J
			ML	0.050	*Type D*	D
	Group C/D		OL	0.026	*Type F*	J
			SM-ML	0.047	*Type F*	J/B
			CL	0.030	*Type D*	B
Stroud Road (sr)	Group C	none	CL	0.036	*Type F*	B
			ML	0.048	*Type D*	A
	Group C		OL	0.030	*Type F*	J
			SC	0.022	*Type D*	K
			CL	0.038	*Type D*	B
	Group C		OL	0.019	*Type F*	J
			CH	0.056	*Type F*	C
			CH	0.041	*Type F*	C
	Group D		SP	0.022	*Type F*	I
	Group C/D		GM	0.045	*Type F*	J
			GM	0.058	*Type F*	J
Tillegra (ti)	Group C	none	ML	0.036	*Type F*	J
			SM	0.038	*Type D*	J
			ML	0.057	*Type D*	I
	Group C/D		CL	0.037	*Type D*	B
			CL	0.044	*Type F*	D
	Group C		OL	0.025	*Type F*	J
			SM-ML	0.046	*Type F*	J/B
			SM-ML	0.043	*Type D*	J/D
	Group D		ML	0.039	*Type F*	J
			ML	0.051	*Type F*	B
			CL	0.025	*Type D*	B
			CL	0.043	*Type D*	D
	Group D		OL	0.020	*Type F*	J
			CL	0.022	*Type F*	A
			CL	0.022	*Type F*	A

Table 12 Dungog Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
Wards River (wd)	Group C/D	none	OL	0.035	*Type F*	J
			SM	0.051	*Type D*	J
			CH	0.019	*Type D*	D
			CH	0.022	*Type D*	B
	Group C/D		OL	0.040	*Type D*	J
			ML	0.051	*Type D*	B
			CL	0.028	*Type D*	B
			CL	0.040	*Type D*	B
	Group C		OL	0.039	*Type F*	J
			CL	0.032	*Type D*	B
	Group B/C		SM	0.030	*Type F*	J
			SM	0.046	*Type D*	J
Williams Range (wi)	Group D	none	CL	0.024	*Type D*	J
			GM	0.040	*Type F*	J
	Group D		OL	0.017	*Type F*	J
			ML	0.035	*Type D*	B
			CL	0.025	*Type D*	B
	Group B		ML	0.037	*Type F*	J
			ML	0.049	*Type D*	B
	Group B		ML	0.028	*Type D*	B
			OL	0.027	*Type D*	J
	Group D		OL	Peaty	*Type F*	J
			ML	0.045	*Type D*	D
	Group B/C		ML	0.042	*Type F*	J
			ML	0.053	*Type D*	B
			CL	0.030	*Type F*	G
	Group B/C		ML	0.033	*Type F*	J
			ML	0.051	*Type D*	B
			CL	0.022	*Type D*	G
	Group D		OL	0.016	*Type F*	J
			ML	0.048	*Type D*	B
	Group B/C		ML	0.045	*Type F*	J
			ML	0.052	*Type D*	D
Washpool (ws)	Group C/D	none	GM	0.025	*Type F*	J
			GM	0.028	*Type C*	J
Wangat (wt)	Group D	none	OL	0.004	*Type F*	J
	Group D		OL	0.018	*Type D*	J
	Group B		OH	Peaty	*Type F*	J
			OL	0.016	*Type F*	J
	Group B		OL	0.026	*Type D*	J
			CL	0.034	*Type D*	D
			CL	>0.087	*Type F*	C
			CH	0.024	*Type D*	A
			CL	0.021	*Type F*	C

Table 13 Newcastle Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Awaba (aw)	very high erosion hazard; localised steep slopes with mass movement potential; shallow soils with low fertility	10 to 60	Group B/C	sporadic	SC	0.034	*Type D*	B
					SC-CM	0.02	*Type D*	B
					CH	0.023	*Type D*	A
Blind Harrys Swamp (ba)	subject to permanently high watertables and waterlogging; shallow non cohesive soils pose risks to foundations and watertable pollution	<2	Group D	endemic	PT	Peaty	*Not tested*	J
					SP	0.026	*Type F*	nt
Black Camp Creek (bc)	subject to flooding, permanent or seasonal waterlogging, high erosion hazard; localised areas of high run-on ; risks to foundations	1 to 3	Group C	sporadic	ML	0.053	*Type D*	J
					ML	0.048	*Type D*	D
					CL	0.044	*Type D*	B
Beresfield (be)	high soil erosion hazard; general risks of mine subsidence; localised steep slopes, high run-on, rock outcrop, seasonal waterlogging	3 to 15	Group C	sporadic	ML	0.033	*Type D*	B
					CH	0.018	*Type D*	G
					CL	0.048	*Type F*	B
			Group B		ML	0.028	*Type F*	J
					CH	0.017	*Type F*	C
Bobs Farm (bf)	permanently high watertable, seasonal waterlogging and flooding hazards; localised permanent waterlogging; risks to foundations	<1	Group D	endemic	OL	0.003	*Type F*	J
					CH	0.025	*Type D*	G
Bolwarra Heights (bh)	high erosion hazard; localised steep slopes contribute to mass movement, high run-on and waterlogging of lower slopes; localised shallow soils and rock outcrop; risks to foundations		Group C	sporadic	SM	0.033	*Type F*	I
					CL	0.028	*Type F*	A
					SM	0.045	*Type F*	J
					CH	0.022	*Type F*	G
Birdsview (bi)	generally steep slopes, high run-on and high erosion hazard; localised mass movement, shallow soils and rock outcrop	<45	Group D	none	SM	0.021	*Type F*	J
					SM	0.041	*Type D*	J
					SC	0.027	*Type D*	D
					SC	0.030	*Type D*	D
					CH	0.023	*Type F*	A
Brecon (br)	high erosion hazard; localised shallow soils; high run-on and waterlogging of lower slopes; risks to foundations	2 to 10	Group C/D	sporadic	SM	0.041	*Type F*	J
					CL	0.035	*Type F*	J
					CH	0.025	*Type D*	G
Boyces Track (bt)	coarse non cohesive soils with low fertility; widespread potential for wind erosion and mass movement; localised	>25	Group A	endemic	SW	0.000	*Type C*	J
					SW	0.000	*Type C*	I

Table 13 Newcastle Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	steep slopes; risks to foundations				SW	0.000	*Type C*	I
					SW	0.000	*Type C*	I
Cabbage Tree Mountain (cm)	steep slopes with high erosion hazard; some high run-on to low areas, rock falls, shallow soils, rock outcrop; general risks to foundations	>25	Group C	sporadic	ML-CL	0.041	*Type D*	E/D
					CL	0.030	*Type D*	D
					CL-ML	0.040	*Type D*	D
Cockle Creek (cc)	permanently high watertables and waterlogging in low areas; localised shallow soils; risks to foundations	<2	Group C/D	common	CH	0.026	*Type D*	B
					SM	0.000	*Type F*	J
					SC	0.032	*Type F*	B
					SC	0.026	*Type F*	B
Cedar Hill (ce)	steep landscape subject to mass movement and high erosion hazard; mine subsidence/foundation risks; localised high run-on and seasonal waterlogging of lower slopes	15 to 40	Group C	sporadic	CL	0.024	*Type D*	J
					CH	0.022	*Type D*	A
Clay Hill (ch)	steep landscapes subject to mass movement and high erosion hazards	20 to 40	Group C/D	none	OL	0.029	*Type D*	J
					CH	0.025	*Type D*	H
					ML	0.052	*Type F*	D
					CL	0.038	*Type D*	D
Clarencetown (cl)	shallow soils with high erosion hazard; localised rock outcrops; waterlogging in low areas	5 to 15	Group D	sporadic	ML	0.034	*Type F*	J
					SM	0.048	*Type D*	J
					CL	0.031	*Type D*	D
Doyalson (do)	high erosion and localised run-on hazards; mine subsidence and low fertility	<10	Group C/D	na	SM-SC	0.041	*Type C*	B
					SC	0.029	*Type C*	B
					CH	0.018	*Type D*	B
Emu Creek (ec)	high erosion hazard and mass movement associated with steep slopes, shallow soils; localised high run-on to lower areas; general risks to foundations	20 to 50	Group C	sporadic	ML-CL	0.021	*Type D*	D
					CH	0.023	*Type D*	D
Fullerton Cove (fc)	high run-on; permanently high watertables, waterlogging in low areas; localised wave erosion; foundation risks	<3	Group D	endemic	CL	Peaty	*Type F*	J
					CL	Peaty	*Type F*	J
Gan Gan (gg)	steep shallow soils and rock outcrop; high erosion hazard; localised mass movement and rock falls; high run-on to low	>25	Group B	sporadic	ML-CL	0.014	*Type D*	J
					CL-ML	0.058	*Type D*	E

Table 13 Newcastle Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	areas; general risks to foundations;				CL	0.018	*Type F*	C
Gateshead (ga)	high erosion hazard; steep slopes contributing to general rock fall susceptibility, localised high run-on, waterlogging of lower areas; localised risks to foundations	<15	Group C	sporadic	PT	Peaty	*Type F*	J
					CH	0.019	*Type D*	A
					GM	0.019	*Type F*	J
					CH	0.015	*Type D*	A
					CH	0.020	*Type D*	A
Gilmore Hill (gi)	steep slopes, shallow soils, rock outcrop; high erosion hazards; risks to foundations	20 to 50	Group B	sporadic	SM	0.022	*Type F*	J
					SM	Peaty	*Type F*	I
					CL	0.031	*Type D*	B
Glenurie Hill (gl)	high erosion hazard; localised steep slopes, mass movement, shallow soils, rock outcrop, high run-on, waterlogging low areas	10 to 20	Group C/D	sporadic	SM	0.043	*Type F*	J
					CH	0.036	*Type D*	D
					SM	0.026	*Type F*	J
Gardiners Road (gr)	steep slopes, mass movement, high erosion hazard; localised rock fall, shallow soil, rock outcrop; foundation hazards	20 to 30	Group B	none	SM	0.038	*Type F*	J
					SM	0.049	*Type F*	J
					CL	0.035	*Type D*	B
George Trig (gt)	shallow soils, rock outcrop; high erosion hazard; localised waterlogging	10 to 20		none	SM	0.044	*Type D*	J
			Group D		ML	0.023	*Type D*	J
Glen William (gw)	high erosion hazard; localised shallow soils, high run-on, waterlogging lower areas; localised risks to foundations	1 to 15	Group C	sporadic	ML	0.039	*Type F*	C
					CH	0.022	*Type D*	B
					SC	0.032	*Type F*	B
			Group C/D		PT	Peaty	*Type F*	J
					ML	0.041	*Type D*	D
					CH	0.022	*Type D*	G
Half Moon Brush (hb)	shallow soils, steep slopes, mass movement, high erosion hazard; localised rock outcrop and high run-on; risks to foundations	20 to 40+	Group D	none	SM	0.038	*Type F*	J
					ML	0.049	*Type D*	B
					CH	0.021	*Type D*	B
					OL	0.020	*Type F*	J
Heddon Greta (hg)	shallow non cohesive soils, localised high run-on, seasonal waterlogging in low areas; localised wind erosion hazard; localised risks to foundations	2 to 10	Group B/C	none	SM	0.016	*Type F*	J
					SC	0.031	*Type F*	I
					SC	0.024	*Type F*	C
					CH	0.026	*Type D*	G

Table 13 Newcastle Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Hungry Hill (hh)	steep landscape, mass movement; high erosion hazard, shallow soils, rock outcrop; localised high run-on and waterlogging low areas; risks to foundations	20 to 45	Group C/D	none	SM SC CL	0.030 0.040 0.039	*Type F* *Type D* *Type D*	J D G
Hilldale (hi)	localised shallow soils, high erosion hazard, high run-on and waterlogging in low areas	5 to 15	Group C	none	SM CL CL	0.038 0.026 0.025	*Type D* *Type F* *Type D*	J J B
Hamilton (hm)	coarse non cohesive soils; high wind erosion hazard; localised areas of high run-on, waterlogging; localised risks to foundations and watertable pollution	<2	Group A	widespread	SM SM SC	0.015 0.016 0.009	*Type F* *Type F* *Type F*	J J I
Hawks Nest (hn)	coarse non cohesive soils; high wind erosion hazard; localised areas of permanently high watertables, waterlogging; localised risks to foundations and watertable pollution	<10	Group A	endemic	SW SW SW SW	0.000 0.000 0.000 0.000	*Type C* *Type C* *Type C* *Type C*	J I I I
Hexham Swamp (hs)	low-lying, high watertable, waterlogging, flood prone; localised erosion hazard; widespread risks to foundations	<1	Group D	endemic	OL CL	Peaty 0.039	*Type D* *Type F*	J A
Hunter (hu)	flood prone; localised high watertables, seasonal waterlogging and erosion hazards	<1	Group B Group C Group B Group C/D	endemic	SC CH CH SP ML ML	0.037 0.021 0.029 0.014 0.030 0.031	*Type F* *Type D* *Type D* *Type F* *Type D* *Type D*	I F D I A A
Ironstone Mountain (im)	steep slopes, mass movement; shallow soils, high erosion hazards; localised high run-on; risks to foundations	20 to 40+	Group C	none	SM SM CH	0.016 0.047 0.027	*Type F* *Type F* *Type D*	J J D
Killingworth (ki)	high erosion hazard; localised shallow soils, rock outcrop; high run-on, waterlogging low areas; mine subsidence, risks to foundations	3 to 20	Grop C/D	sporadic	SM ML CL	0.027 0.036 0.036	*Type F* *Type D* *Type D*	J D B
Lower Pindimar (lp)	low-lying, sandy, non cohesive soils; permanently high watertable and seasonal waterlogging; localised areas of high run-on, permanent waterlogging and flood hazard; localised	<3	Group A/B	endemic	SP SM	0.000 0.013	*Type C* *Type C*	J I

Table 13 Newcastle Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	risks to foundations							
Malabula Point (mp)	high erosion hazard from steep slopes, some shallow soils, and rock outcrop on uplands; localised high run-on, seasonal waterlogging of low areas;	5 to 30	Group C/D	sporadic	ML	0.036	*Type D*	D
					CH	0.049	*Type F/D*	I
Mount Douglas (md)	localised mass movement; shallow soils, rock outcrop, water erosion hazards; risks to foundations	10 to 20	Group B		OL	Peaty	*Type F*	J
					CH	0.011	*Type D*	A
Medowie (me)	localised shallow soils, extreme erodibility and high erosion hazard; localised risks to foundations	2 to 15	Group C/D	sporadic	SC	0.031	*Type F*	B
					CL	0.081	*Type F*	C
					CL	0.067	*Type F*	C
					CH	0.071	*Type F*	C
					MH	0.044	*Type F*	A
					CH	0.052	*Type F*	C
					CH	0.060	*Type F*	C
					CH	0.069	*Type F*	C
Millers Forest (mf)	permanently high watertables, waterlogging, flood prone; widespread risks to foundations	<1	Group C	endemic	OL	0.023	*Type F*	J
					CL	0.025	*Type D*	A
Middlehope (mi)	shallow soils, rock outcrop, high erosion hazard; localised steep slopes, mass movement and high run-on; localise foundation hazards	15 to 40	Group C/D	sporadic	SM	0.035	*Type F*	J
					SM	0.041	*Type F*	J
					CH	0.018	*Type D*	G
Mount Johnstone (mj)	steep slopes, mass movement, shallow soils, rock outcrop, high erosion hazard; widespread risks to foundations	>25	Group D	none	ML	0.059	*Type D*	B
					ML	0.034	*Type F*	J
					ML	0.044	*Type D*	B
North Eelah (ne)	high erosion hazard; localised shallow soil, rock outcrop; seasonal waterlogging of low areas	5 to 20	Group C/D	sporadic	OL	0.023	*Type F*	J
					OL	0.017	*Type F*	J
					CH	0.028	*Type D*	H
					SC	0.041	*Type F*	I
			Group C		CH	0.029	*Type F*	H
					CH	0.037	*Type D*	H
					SM	0.042	*Type F*	J
					SM	0.047	*Type F*	J
					CH	0.034	*Type D*	G

Table 13 Newcastle Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Nerong Waterholes (nw)	low areas of high run-on, high watertables, seasonal waterlogging and flood hazard; some permanent waterlogging; general risks to foundations	<2	Group C/D	endemic	CH	0.025	*Type D*	B
					CH-MH	0.017	*Type D*	J
					CH	0.026	*Type D*	B
Norah Head (nh)	extreme wind erosion and high water erosion hazards; non cohesive highly permeable soils with very low fertility	<15	Group A	na	SP-SM	0.016	*Type FC*	J
					SP	0.015	*Type C*	J
					SM	0.021	*Type C*	J
Paterson River (pa)	high water erosion and flood hazard; localised non cohesive soil, wind erosion hazard; general risks to foundations	<3	Group B	sporadic	SW	0.025	*Type F*	I
					SW	0.026	*Type F*	I
North Arm Cove (nc)	generally high erosion hazard; localised areas with high run-on	<15	Group C/D	sporadic	ML-CL	0.051	*Type D*	E
					CH	0.024	*Type F*	A
					ML-CL	0.043	*Type F*	J
Nungra (ng)	low-lying areas of high run-on, permanently high watertables, seasonal waterlogging and flood hazards; localised risks to foundations	<3	Group C/D	sporadic	ML-CL	>0.079	*Type D*	I
					CL-ML	>0.093	*Type D*	I
Rivermead (ri)	localised shallow soils, high run-on, seasonal waterlogging, and flooding; localised erosion hazard; general risks to foundations	<4	Group B	sporadic	SC	0.031	*Type F*	J
					SC	0.025	*Type D*	I
					SC	0.027	*Type F*	B
			Group C		OL	0.028	*Type F*	J
					SM	0.044	*Type F*	J
					CH	0.028	*Type D*	D
					CH	0.035	*Type D*	D
River Road (rr)	generally high erosion hazard; localised steep slopes, shallow soils and rock outcrop; low areas with high run-on and seasonal waterlogging	<40	Group C/D	sporadic	CL-ML	>0.032	*Type D*	I
					CL-ML	0.042	*Type D*	D
					CH	0.020	*Type D*	A
Shoal Bay (sb)	non cohesive soils, wind erosion hazard; localised steep slopes; general risks of watertable pollution	<15	Group A	widespread	SW	0.000	*Type C*	I
					SW	0.000	*Type C*	J
					SW	0.009	*Type C*	I
Shoal Bay Swamp (ss)	low lying area with high run-on, permanently high watertable , permanent waterlogging and flood hazard; non cohesive materials with wind high erosion hazard; general risks to	<5	Group D	endemic	SW	0.009	*Type C*	I/J

Table 13 Newcastle Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	foundations							
Sandy Creek (sc)	high run-on, permanently high watertable, seasonal waterlogging, flood prone; high erosion hazards; localised shallow soil; risks to foundations and watertable pollution	<1	Group B	sporadic	ML ML	0.040 0.041	*Type D* *Type F*	B A
Seaham (se)	high water and wave erosion hazards; localised high run-on and waterlogging of low areas	3 to 15	Group B Group D	sporadic	CL CH ML	0.032 0.027 0.044	*Type D* *Type D* *Type F*	B B J
Shamrock Hill (sh)	high erosion hazard; localised steep slopes, mass movement; shallow soils, high run-on, seasonal waterlogging in low areas; mine subsidence, risks to foundations	10 to 15	Group C	none	SM SM CL CL	0.032 0.041 0.026 0.040	*Type F* *Type D* *Type D* *Type D*	J J D D
Stockton Beach (sk)	shallow non cohesive soils; wind and wave erosion hazards; localised steep slopes, mass movement; some local high watertables and waterlogging; general risks to foundations	na	Group A	widespread	SP SP	0.009 0.011	*Type C* *Type C*	I I
Stockrington (sn)	steep slopes, mass movement and high erosion hazard; localised rock falls; localised high run-on to low areas; instances of mine subsidence	15 to 20	Group B	none	SC GP SM	0.015 0.039 0.039	*Type F* *Type C* *Type D*	J J J
Sugarloaf (su)	steep slopes, mass movement, rock falls, mine subsidence; serious general risks to structures; localised shallow soils and rock outcrop; high erosion hazard	>30	Group B	none	SM SM-ML CL SC	0.039 0.042 0.038 0.028	*Type F* *Type F* *Type D* *Type D*	J B&I/A D B
Tereel Ridge (tr)	generally high erosion hazard associated with steep slopes and shallow soils; localised rock outcrop and rock fall hazard; localised high run-on to low areas; general risks to foundations	>20	Group D	endemic	ML	0.032	*Type F*	A
The Branch (tb)	general erosion hazard, high watertables; localised high run-on and seasonal waterlogging in low areas; localised risks to foundations	<2	Group D	sporadic	OL MH CL	0.027 0.071 0.048	*Type F* *Type F* *Type D*	J I D
Ten Mile Road (tm)	water erosion hazard; localised shallow soil, rock outcrop; high run-on and seasonal waterlogging of low areas	5 to 10	Group C	sporadic	SM SM	0.016 0.054	*Type F* *Type D*	J J

Table 13 Newcastle Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					MH	0.065	*Type D*	D
Tea Gardens (tn)	permanently high watertable, seasonal waterlogging; localised non cohesive soils and wind erosion; permanent waterlogging in low areas; risks to foundations and watertable pollution	<5	Group A/B	endemic	SM	0.016	*Type C*	J
					SM	0.018	*Type C*	I
					SC	Pan	*Type C*	I
					SC	0.013	*Type C*	C
					SM	Peaty	*Type F*	J
					SC	Pan	*Type C*	J
Tuggerah (tg)	high wind erosion hazard; highly permeable soils with very low fertility; localised flooding and high watertable hazards	1 to 10	Group B	na	SM	0.009	*Type C*	I
					SP-SM	0.016	*Type C*	I
					SP	0.006	*Type C*	I
Vacy (va)	localised shallow soils and rock outcrop; high run-on and seasonal waterlogging of low areas; generally high erosion hazard; localised foundation hazards	2 to 10		sporadic	ML	0.042	*Type D*	B
					CL	0.036	*Type D*	D
					CH	0.023	*Type D*	D
					CH	0.024	*Type D*	G
			Group C		ML	0.032	*Type F*	J
Warners Bay (wa)	localised steep slopes and mass movement potential; mine subsidence area; seasonal waterlogging on lower slopes; low fertility	3 to 20	Group B	sporadic	ML	0.037	*Type D*	J
					ML	0.059	*Type D*	B
					CH	0.027	*Type D*	A
Wallis Creek (wc)	non cohesive soils with high water and wind erosion hazards; flood prone; localised high watertables and waterlogging; general risks for foundations and watertable pollution	<3	Group B/C	cpmmon	ML	0.042	*Type F*	I
					SC	0.032	*Type F*	I
					OL	0.029	*Type F*	J
Welshmans Creek (we)	high erosion hazard; localised steep slopes, mass movement potential; rock outcrop; high run-on and seasonal waterlogging of low areas; localised risks to foundations	10 to 25	Group C	none	SC	0.039	*Type D*	D
					ML	0.046	*Type F*	J
					ML	0.046	*Type D*	B
					CH	0.038	*Type D*	D
Wallalong (wg)	localised shallow soils and rock outcrop; high run-on, high watertables and seasonal waterlogging in low areas; generally high erosion hazard; general foundation hazards	2 to 10	Group B/C	sporadic	ML	0.032	*Type D*	J
					SC-CL	0.047	*Type D*	D
					CH	0.033	*Type D*	F
Williams River (wr)	permanently high watertables, seasonal waterlogging; flood hazard; high erosion hazard; general risks to foundations	<3	Group B/C	frequent	ML	0.036	*Type F*	A
					ML	0.042	*Type D*	A

Table 13 Newcastle Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Wyong (wy)	flooding, seasonal waterlogging and localised streambank erosion hazards; localised potential for acid sulfate soils; poorly drained impermeable soils with low fertility	<3	Group D	na	SC-ML	0.028	*Type F*	A-B

Table 14 Port Stephens

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Alum Mountain (am)	high erosion hazard associated with steep slopes, shallow soils and rock outcrop; localised rock fall and high run-on to lower areas; general risks to foundations	20 to 50	Group C	1.23	sporadic	MH	0.004	*Type F*	J
						ML-CL	0.046	*Type F*	I
						CH	0.020	*Type D*	F
Bobs Farm (bf)	permanently high watertable, seasonal waterlogging and flooding hazards; localised permanent waterlogging; risks to foundations	<1	Group B	80.77	endemic	ML-CL	Peaty	*Type F*	J
						CL	0.056	*Type F*	C
						SM	0.019	*Type C*	I
Bombah Point (bp)	shallow soils with high erosion hazard; localised rock outcrop, steep slopes, non cohesive peaty materials; occasional rock fall	<25	Group B	21.16	common	OH	Peaty	*Type F*	J
Boyces Track (bt)	coarse non cohesive soils with low fertility; widespread potential for wind erosion and mass movement; localised steep slopes; risks to foundations	>25	Group A	0.84	widespread	SW	0.000	*Type C*	J
						SW	0.000	*Type C*	I
						SW	0.000	*Type C*	I
						ML	0.000	*Type C*	I
Cabbage Tree Mountain (cm)	steep slopes with high erosion hazard; some high run-on to low areas, rock falls, shallow soils, rock outcrop; general risks to foundations	>25	Group C	0.32	sporadic	ML-CL	0.037	*Type D*	J
						ML-CL	0.041	*Type D*	E/D
						CL	0.030	*Type D*	D
						CL-ML	0.040	*Type D*	D
Emu Creek (ec)	high erosion hazard and mass movement associated with steep slopes, shallow soils; localised high run-on to lower areas; general risks to foundations	20 to 50	Group C	0.01	sporadic	ML-CL	0.011	*Type D*	J
						ML-CL	0.021	*Type D*	D
						CH	0.023	*Type D*	D
						CH	0.022	*Type D*	D
Eurunderee Swamp (es)	low lying sandy soils with high run-on; permanently high watertables, waterlogging, flooding hazard; high erosion hazard; general risks to foundations	<2	inapplicable	23.03	endemic	PT	Peaty	*Not tested*	J
						SW	0.000	*Type C*	J
Fullerton Cove (fc)	high run-on; permanently high watertables, waterlogging in low areas; localised wave erosion; foundation risks		Group D	90.93	endemic	PT	Peaty	*Type D*	J
						SC	0.002	*Type C*	K
						SM	0.000	*Type C*	J
Fingal Head (fh)	non cohesive soils with high wind erosion hazard; low areas with high run-on, seasonal waterlogging; steeper slopes with mass movement and high water erosion hazard; localised risks to foundations	<45	Group A	0.08	sporadic	SW	0.000	*Type C*	J
						SW	0.000	*Type C*	I
						SW	Pan	*Type C*	I
						SW	0.017	*Type C*	J
Grey Gum Creek (gc)	low area of high run-on and waterlogging; high erosion hazard; localised flooding; local risks to foundations	<5	Group C	0.00	none	ML-CL	0.019	*Type F*	J
						ML-CL	0.040	*Type D*	D

Table 14 Port Stephens

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
						CL	0.024	*Type D*	
						ML-CL	>0.060	*Type D*	D
						CL-ML	0.038	*Type D*	D
Gan Gan (gg)	steep shallow soils and rock outcrop; high erosion hazard; localised mass movement and rock falls; high run-on to low areas; general risks to foundations;	>25	Group B	2.06	sporadic	ML-CL	0.014	*Type D*	J
						CL-ML	0.058	*Type D*	E
						CL	0.018	*Type F*	C
Green Hills (gh)	shallow soils and rock outcrop; localised erosion hazard; low areas of high run-on and seasonal waterlogging; general risks to foundations	5 to 15	Group B/C	0.28	sporadic	ML	0.012	*Type F*	J
						ML	0.034	*Type F*	A
						CH	0.019	*Type D*	G
Hawks Nest (hn)	coarse non cohesive soils; high wind erosion hazard; localised areas of permanently high watertables, waterlogging; localised risks to foundations and watertable pollution	<10	Group A	2.00	endemic	SW	0.005	*Type C*	J
						SW	0.000	*Type C*	I
						SW	0.001	*Type C*	I
						SW	0.000	*Type C*	I
Johnsons Hill (jh)	shallow soils and rock outcrop with high erosion hazard; localised areas of steep slope; localised low areas with high run-on; general risks to foundations	20 to 40	Group B/C	0.00	sporadic	PT	Peaty	*Type F*	J
						ML-CL	0.038	*Type F*	D
Lower Pindimar (lp)	low-lying, sandy, non cohesive soils; permanently high watertable and seasonal waterlogging; localised areas of high run-on, permanent waterlogging and flood hazard; localised risks to foundations	<3	Group A/B	76.64	endemic	SP	0.000	*Type C*	J
						SP	0.000	*Type C*	J
						SM	0.013	*Type C*	I
						SW	0.000	*Type C*	I
Mount George (mg)	steep slopes with high erosion hazard; localised mass movement; low areas with high run-on; general risks to foundations	20 to 60	Group C/D	0.04	sporadic	ML-CL	0.016	*Type F*	J
						ML-CL	0.030	*Type D*	B
						CL-ML	0.055	*Type D*	D
						MH-CH	0.017	*Type D*	B
Markwell Heights (mh)	high erosion hazard from generally steep slopes, shallow soils, rock outcrop on uplands; localised mass movement and rock falls; localised high run-on, seasonal waterlogging of low areas; general risks to foundations	30 to 50	Group C/D	0.00	sporadic	ML	0.029	*Type F*	B
Mallabula Point (mp)	high erosion hazard from steep slopes, some shallow soils, and rock outcrop on uplands; localised high run-on, seasonal waterlogging of low areas;	5 to 30	Group C/D	4.11	sporadic	ML	0.027	*Type D*	J
						ML	0.036	*Type D*	D
						CH	0.049	*Type D*	I
Myall River (mr)	low-lying areas of permanently high watertables, seasonal	<2	Group C	94.35	endemic	OL	Peaty	*Type F*	J

Table 14 Port Stephens

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	waterlogging and flood hazard; some permanently waterlogged areas; general risks to foundations					CL	>0.069	*Type F*	C
						OL	Peaty	*Type F*	J
						CH	0.010	*Type F*	
North Arm Cove (nc)	generally high erosion hazard; localised areas with high run-on	<15	Group C/D	2.25	sporadic	ML-CL	0.036	*Type D*	J
						ML-CL	0.051	*Type D*	E
						CH	0.024	*Type F*	A
						ML	0.043	*Type F*	A
						ML	0.025	*Type F*	I
Nungra (ng)	low-lying areas of high run-on, permanently high watertables, seasonal waterlogging and flood hazards; localised risks to foundations	<3	Group C/D	0.98	sporadic	ML	>0.045	*Type F*	J
						ML-CL	>0.079	*Type D*	I
						CL-ML	>0.093	*Type D*	I
Nerong (no)	generally high erosion hazard; localised shallow soils and rock outcrop; high run-on and seasonal waterlogging of low areas; localised risks to foundations	<15	Group C/D	0.24	sporadic	SM	0.034	*Type D*	J
						SM	0.038	*Type D*	J
						CL	0.027	*Type D*	E
						CH	0.021	*Type D*	B
Nerong Waterholes (nw)	low areas of high run-on, high watertables, seasonal waterlogging and flood hazard; some permanent waterlogging; general risks to foundations	<2	Group D	10.23	endemic	OH	Peaty	*Type D*	J
						CH	0.025	*Type D*	B
						CH-MH	0.017	*Type D*	J
						CH	0.026	*Type D*	B
Pindimar Road (pr)	generally high erosion hazard; localised shallow soils and rock outcrop; low areas with high run-on and seasonal waterlogging	<25	Group C	0.05	sporadic	ML	0.019	*Type F*	J
						ML	0.047	*Type F*	D
						CH	0.025	*Type F*	C
						CH	>0.090	*Type F*	C
						CH	0.041	*Type D*	D
River Road (rr)	generally high erosion hazard; localised steep slopes, shallow soils and rock outcrop; low areas with high run-on and seasonal waterlogging	<40	Group C/D	0.31	sporadic	CL-ML	0.047	*Type D*	D
						CL-ML	>0.032	*Type F*	I
						CL	0.042	*Type D*	D
						CH	0.020	*Type D*	A
Shoal Bay (sb)	coarse non cohesive soils; high wind erosion hazard; localised areas of permanently high watertables, waterlogging; localised risks to foundations and watertable pollution	<1	Group A	2.48	widespread	SW	0.000	*Type C*	J
						SW	0.000	*Type C*	I
						SW	0.000	*Type C*	I
						SW	0.002	*Type C*	J
Stockton Beach (sk)	shallow non cohesive soils; wind and wave erosion hazards; localised steep slopes, mass movement; some local high watertables and waterlogging; general risks to foundations	<20	Group A	3.17	widespread	SW	0.000	*Type C*	I
						SW	0.000	*Type C*	J

Table 14 Port Stephens

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Shoal Bay Swamp (ss)	low lying area with high run-on, permanently high watertables, permanent waterlogging and flood hazard; non cohesive materials with wind high erosion hazard; general risks to foundations	<5	Group D	7.28	endemic	PT	Peaty	*Type F*	J
Swamp Trail (sw)	low areas of generally high run-on, seasonal waterlogging and water erosion hazard	<10	Group D	0.00	sporadic	ML	0.003	*Type D*	J
						ML	0.044	*Type D*	E
						CL	0.036	*Type D*	D
The Branch (tb)	general erosion hazard, high watertables; localised high run-on and seasonal waterlogging in low areas; localised risks to foundations	<4	Group C/D	1.57	sporadic	ML-CL	0.028	*Type F*	J
						CH	0.041	*Type D*	F
						CL-ML	0.069	*Type D*	D
						CL	0.017	*Type D*	D
Tea Gardens (tn)	permanently high watertable, seasonal waterlogging; localised non cohesive soils and wind erosion; permanent waterlogging in low areas; risks to foundations and watertable pollution	<5	Group A	0.99	endemic	SM	Peaty	*Type C*	J
						SM	0.000	*Type C*	J
						SW-SP	0.000	*Type C*	
						SW	Pan	*Type C*	J
Terreel Ridge (tr)	generally high erosion hazard associated with steep slopes and shallow soils; localised rock outcrop and rock fall hazard; localised high run-on to low areas; general risks to foundations	>20	Group D	0.00	none	ML	0.009	*Type F*	J
						ML	0.032	*Type F*	A
Tamboy (ty)	low lying, non cohesive sands; generally high watertable, waterlogging and flood hazard; general risks to foundations	<2	Group C/D	93.36	endemic	SM	Peaty	*Type F*	J
						MH	Peaty	*Type F*	J
						SM	0.000	*Type C*	J
						SM	0.003	*Type F*	J
						SM	Pan	*Type F*	J

Table 15 Wallarawang Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
Ben Bullen (bb)	localised steep slopes, shallow soils, rock outcrop	5 to 40	Group B	none	ML	0.045	*Type F*	J
					SC	0.019	*Type F*	I
					CL	0.028	*Type F*	A
			Group D		SM	0.020	*Type F*	J
					SM	0.029	*Type F*	I
Cullen Bullen (cb)	high erosion hazard; high run-on to low areas; localised rock outcrop and rock fall; localised risks to foundations	10 to 25	Group C	none	CL	0.050	*Type D*	nt
					CL	0.023	*Type F*	A
			Group B		ML	0.043	*Type D*	J
					CH	0.014	*Type D*	B
					CL	0.042	*Type D*	nt
					ML	0.076	*Type F*	D
					CL	0.018	*Type F*	C
					SC	0.038	*Type D*	nt
Canobla Gap (cg)	generally high water erosion hazards; localised steep slopes; widespread risks to foundations	20 to 50	Group D	none	SC	0.025	*Type F*	J
					CL	0.024	*Type D*	D
			Group C		CL	0.022	*Type D*	B
					SW	0.057	*Type F*	J
Coco (co)	generally steep slopes and shallow soils; localised rock outcrops; some mass movement;	>25	Group B	none	CL	0.040	*Type D*	J
					CH	0.008	*Type F*	C
					CL	0.015	*Type D*	A
					SC	0.054	*Type F*	D
			Group B		CL-ML	0.045	*Type F*	J
					SC	0.039	*Type F*	B
					ML	0.047	*Type F*	J
					SC	0.049	*Type D*	D
					SC	0.029	*Type F*	B
					CL	0.035	*Type D*	D
			Group D		SM	0.031	*Type F*	J
					SM	0.035	*Type F*	J
					SM	0.030	*Type F*	J
					SC	0.049	*Type D*	nt
Deanes Creek (dc)	high run-on, high watertables, waterlogging in low areas; high risks to foundations	<5		none	SC	0.040	*Type F*	B
			Group D		SC	0.032	*Type F*	C
					SC	0.033	*Type F*	C
					SP	0.017	*Type C*	J
Glen Alice (ga)	generally high water erosion hazards; localised steep slopes;	5 to 20	Group C	none	CL	0.027	*Type D*	B

Table 15 Wallarawang Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
	local flooding hazards				ML	0.057	*Type F*	J
					ML	0.059	*Type D*	B
Gymea (gy)	shallow soils, widespread water erosion hazard; localised steep slopes and rock fall hazard; high run-on in low areas; low fertility	10 to 25	Group C/D	none	SC	0.018	*Type D*	nt
Hassans Walls (hw)	very steep slopes, mass movement and rock falls; shallow soils and rock outcrop; high erosion hazard; general risks to foundations	>40		none	CL	0.019	*Type D*	B
			Group D		SP	0.010	*Type C*	J
			Group C		SP	0.012	*Type C*	nt
					SM	0.052	*Type D*	nt
Mount Irvine (ir)	no obvious constraints	<5	Group B	none	ML	Peaty	*Type F*	J
					CL	0.033	*Type F*	C
Lithgow (li)	very steep slopes, mass movement and rock falls; shallow soils and rock outcrop; high erosion hazard; general risks to foundations	<10		none	SC	0.026	*Type F*	J
			Group B		ML	0.057	*Type F*	J
					SM	0.059	*Type D*	J
					CL	0.030	*Type D*	A
Long Swamp (ls)	low lying area subject to high run-on, high watertable and waterlogging conditions	<3		none	SC	0.029	*Type D*	D
			Group D		ML	0.019	*Type D*	J
					CL	0.039	*Type D*	D
Medlow Bath (mb)	localised shallow soils and rock outcrop contribute to areas of high erosion hazard	5 to 15		none	SC	0.024	*Type D*	B
					SC	0.018	*Type F*	J
					SW	Peaty	*Type F*	J
Marrangaroo (mr)	steep slopes and rock outcrop; permanently high watertables in low areas	<30	Group B	none	SM	0.028	*Type F*	J
					SC	0.015	*Type F*	C
					SM	0.029	*Type F*	J
					SC	0.021	*Type F*	B
			Group C		SM	0.024	*Type F*	J
					SM	0.021	*Type F*	J
					CL	0.024	*Type D*	B
			Group D		SM	0.023	*Type F*	J
					GM	0.022	*Type F*	J
					SW	0.028	*Type F*	J
					SW	0.035	*Type C*	J
Mount Sinai (ms)	shallow, non cohesive soils with rock outcrop; steep slopes and widespread rock fall hazard; general risks of wind and	>30		none	SP	0.009	*Type C*	J
					SC	0.012	*Type F*	J

Table 15 Wallarawang Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
	water erosion; general risks to foundations		Group D		SC	0.017	*Type F*	J
					SC	0.024	*Type F*	B
					SC	0.025	*Type F*	J
			Group D		SP	0.009	*Type C*	J
					SM	0.012	*Type F*	J
					SC	0.016	*Type F*	J
					SC	0.012	*Type C*	I
Mount Walker (mw)	steep slopes with high risks of mass movement and water erosion; localised shallow soils and rock outcrop; localised risks to foundations	>25	Group D	none	ML	0.037	*Type D*	J
					ML	0.050	*Type D*	nt
					CL	0.037	*Type D*	D
					ML	0.032	*Type F*	J
					CL	0.053	*Type F*	D
			Group B		ML	0.059	*Type F*	J
					CL	0.039	*Type F*	B
					SC	0.068	*Type F*	I
					SC-CL	0.042	*Type D*	D
					ML	0.041	*Type D*	J
Newnes Plateau (np)	localised shallow soils; localised wind erosion	<10	Group B	none	SC	0.025	*Type F*	J
					SC	0.013	*Type F*	B
			Group D		SC	0.018	*Type F*	J
Pipers Flat (pf)	low lying areas subject to high run-on ; localised high watertable and seasonal waterlogging; general risks to foundations	<5		none	ML	0.054	*Type F*	B
					SC	0.040	*Type F*	B
			Group C		SC	0.028	*Type F*	J
					CL	0.055	*Type D*	D
Port Macquarie (pm)	generally high water erosion hazards; localised non cohesive soils	<25	Group C/D	none	ML	0.036	*Type F*	J
					ML	0.060	*Type D*	nt
					CL	0.031	*Type F*	A
					CL	0.035	*Type D*	A
Rowans Hole (ro)	generally high water erosion hazards; local flooding hazards	5		none	SC	0.033	*Type F*	B
			Group C/D		ML	0.053	*Type F*	J
					CL-ML	0.066	*Type F*	D
					CH	0.035	*Type D*	B
Rydal (ry)	shallow soils	10 to25	Group D	none	CL-ML	0.049	*Type D*	nt
					ML	0.029	*Type F*	J
					CL	0.046	*Type D*	D

Table 15 Wallarawang Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Mount Tomah (to)	localised shallow soils and rock outcrop; localised steep slopes with mass movement hazard	10 to 30		none	CL	0.047	*Type D*	D
			Group D		ML	0.017	*Type F*	J
					OL-PT	Peaty	*Type D*	J
					ML	0.043	*Type F*	A
					ML	0.025	*Type F*	J
			Group C		ML	0.022	*Type F*	J
					CL	0.060	*Type F*	C
					SC	0.015	*Type F*	B
			Group C		ML	0.025	*Type F*	J
					ML	Peaty	*Type F*	J
					CL	0.030	*Type F*	C
					CL	0.028	*Type F*	C
					ML	Peaty	*Type F*	J
					CL	0.023	*Type D*	B
					CL	0.068	*Type F*	C
Umbiella (um)	widespread flooding hazard; localised waterlogging and areas of high erosion hazard	<5		none	SC	0.033	*Type D*	D
					SM	0.032	*Type D*	J
			Group B/C		ML	0.047	*Type F*	B
					ML	0.044	*Type F*	B
					SP	0.006	*Type C*	J
					CL	0.036	*Type D*	D
			Group D		ML	0.029	*Type F*	J
					CL	0.044	*Type D*	B
Warragamba (wb)	very high mass movement and soil erosion hazards; steep slopes, highly permeable soils with low fertility	>35		none	SP	0.016	*Type F*	J
Wollangambe (wo)	shallow soils with rock outcrop; high erosion hazard; localised steep slopes with mass movement and rock fall hazards; general risks to foundations	<35		none	SC	0.035	*Type F*	C
			Group D		SP	0.017	*Type F*	J
					ML	0.059	*Type D*	E
			Group B/C		SC	0.015	*Type F*	J
					SC	0.013	*Type F*	I
Wolgan River (wr)	shallow soils upslope; generally high run-on to low areas; localised flooding	<10	Group B	none	SC	0.026	*Type F*	J
			Group B/C		SC	0.010	*Type F*	J
					SM	>0.054	*Type F*	I

Table 16 St Albans Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Colo Heights (ch)	Group C/D	0.00	none	CL	0.037	*Type D*	J
				CL	0.032	*Type D*	D
				CL	0.039	*Type D*	B
				SC-CL	0.036	*Type D*	B
Greens Creek (gc)	Group B/C	0.00	none	SM	0.036	*Type F*	J
				CH	0.026	*Type D*	H
				SM	0.016	*Type F*	J
	Group B/C			ML	0.031	*Type F*	J
				CL	0.028	*Type F*	A
	Group C/D			SM	Peaty	*Type F*	J
				OL	0.032	*Type D*	J
Gymea (gy)	Group C/D	0.00	none	SC	0.030	*Type F*	J
				SM	0.006	*Type F*	I
				SM	0.030	*Type F*	J
				SC	0.022	*Type D*	D
				CL	0.037	*Type D*	D
				CL	0.047	*Type D*	D
Hawkesbury (ha)	Group D	0.00	none	SP	0.031	*Type F*	J
				SP	0.038	*Type F*	J
				CL	0.033	*Type D*	B
				SC	0.042	*Type D*	D
Laguna (lg)	Group C/D	2.59	sporadic	SP	0.041	*Type F*	J
				SP	0.044	*Type F*	J
				CL	0.039	*Type D*	B
	Group D			SM	0.021	*Type F*	J
				CL	>0.087	*Type F*	C
				MH	0.046	*Type D*	E
Lucas Heights (lh)	Group C/D	0.00	none	SM-ML	0.052	*Type F*	J
				ML	0.058	*Type F*	B
				CH	0.020	*Type F*	A
Oxford Falls (of)	Group C	0.00	none	SM	0.012	*Type C*	J
				SM	0.012	*Type C*	J
				SM	0.018	*Type C*	I
				SM	0.014	*Type C*	J
				CL	0.094	*Type F*	C
				SM	0.006	*Type C*	J
				SM	0.021	*Type F*	J
Putty Creek (pc)	Group C	0.00	none	ML	0.036	*Type F*	J
				SM	0.015	*Type F*	J
				OL	0.025	*Type F*	J
Warragamba (wb)	Group D	0.00	none	SP	0.022	*Type C*	J
				SP	0.032	*Type F*	J
				CL	0.035	*Type D*	B
Wisemans Ferry (wf)	Group C	31.46	common	OL	0.034	*Type D*	J
				SP	0.028	*Type F*	J
				ML	0.058	*Type D*	B
				SP	0.043	*Type F*	J
				SM-ML	0.050	*Type F*	I
				ML	0.047	*Type D*	I
				CL	0.028	*Type D*	D
				OL	0.031	*Type D*	J

Table 16 St Albans Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Watagan (wn)		0.14	sporadic	SC	0.067	*Type F*	C
	Group D			SP	0.036	*Type F*	J
				SC	0.023	*Type F*	B
				ML	0.048	*Type F*	J
Wollangambe (wo)	Group C/D	0.00	none	SP	0.012	*Type C*	J
				CL	0.031	*Type F*	A
				SC	0.021	*Type F*	I
				OL	0.040	*Type D*	J

Table 17 Gosford-Lake Macquarie Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Awaba (aw)	very high erosion hazard; steep slopes; mass movement hazard; shallow soils with low fertility	10 to 60	Group B./C	sporadic	CH	0.011	*Type D*	A
Bar Lookout (bl)	mass movement hazard; localised steep slopes	<70	Group D	na	CL	ft	*Type F*	B
Belmont Swamp (bs)	flooding; permanently high watertable, low fertility	<2	inapplicable	na	SM-SC SM	 0.012	*Type C* *Type C*	B & I
Doyalson (do)	high erosion and localised run-on hazards; min subsidence and low fertility	<10	Group C/D	na	SM-SC SC CH	0.041 0.029 0.018	*Type C* *Type C* *Type D*	B B B
Erina (er)	very high soil erosion and water run-on hazards; imperme_able, plastic subsoils with low wet strength, seasonal waterlogging on footslopes	<2	Group C/D	na	CL SC CL	0.030 0.028 0.006	*Type D* *Type D* *Type C*	D B B
Gorokan (gk)	very high soil erosion hazard; seasonal waterlogging; impermeable soils with low fertility	<15	Group C	na	ML-CL CL	0.050 0.041	*Type D* *Type D*	E D
Gymea (gy)	shallow highly permeable soils with very low fertility; rock outcrop; localised steep slopes with high erosion hazard	10 to 25	Group C/D	none	SP SP CL	0.025 0.035 0.027	*Type F* *Type F* *Type D*	J J A
Hawkesbury (ha)	high soil erosion and mass movement hazard; steep slopes rock outcrop; shallow stony, highly permeable soils with low fertility	>25	Group C/D	none	SW SC SC	0.023 0.016 0.032	*Type C* *Type D* *Type D*	J D B
Hawkesbury River (hr)	flood hazard; localised potential for acid sulfate layers; localised permanent and seasonal waterlogging; low fertility	<5	Group D	widespread	SP SP	0.017 0.024	*Type F* *Type F*	I J
Laguna (lg)	high erosion hazard; localised mass movement and run-on hazard; low fertility	5 to 25	Group B/C	none	CL SP SW CL	0.013 0.034 0.035 0.011	*Type D* *Type F* *Type F* *Type F*	A J J C
Lambert (la)	very high soil erosion hazard; rock outcrop, seasonally	<20	Group D	na	SW	0.023	*Type C*	J

Table 17 Gosford-Lake Macquarie Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	perched watertable; highly permeable soils with very low fertility				SW	0.036	*Type C*	J
					CL	0.037	*Type F*	B
					SC	0.027	*Type C*	B
Maroota (ma)	high soil erosion hazard; localised seasonal waterlogging	<10	Group A	none	CL	0.020	*Type F*	C
					SW	0.017	*Type C*	I
					SW	0.021	*Type C*	J
					SW	0.016	*Type C*	J
					SW	0.012	*Type F*	J
					SC	0.017	*Type F*	B
Mangrove Creek (mc)	regular tidal flooding; high acid sulfate potential, saline highly organic layers with low fertility	<3	inapplicable	endemic	SP	0.006	*Type C*	J
					CL	0.026	*Type F*	C
					ML	Peaty	*Type F*	K
					SP	0.009	*Type C*	J
					ML	0.015	*Type F*	A
Mandalong (ml)	mass movement hazard; steep slopes; soils with low fertility and low wet strength	20 to 60	Group C/D	na	MH	0.062	*Type D*	D
					CL-MH	0.052	*Type D*	E
Narrabeen (na)	high wind and wave erosion hazards; non cohesive, highly permeable soils with low fertility	<45	Group A	na	SP	0.007	*Type C*	I
					SP-SM	0.006	*Type C*	I
Norah Head (nr)	extreme wind erosion and high water erosion hazards; non cohesive highly permeable soils with very low fertility	<15	Group A	na	SP-SM	0.016	*Type C*	J
					SP-SM	0.015	*Type C*	J
					SM	0.021	*Type C*	J
Oxford Falls (of)	very high erosion hazard, perched watertables; highly permeable soils with very low fertility; localised rock outcrop	<15	Group C/D	none	SP	0.018	*Type C*	J
					SP	0.017	*Type C*	J
					SP	0.020	*Type C*	J
					SP	0.011	*Type C*	J
					SP	0.015	*Type C*	J
					SP	0.016	*Type C*	J
Somersby (so)	highly permeable soils with low fertility; localised high watertables and stony areas	<15	Group B	na	SC	0.017	*Type C*	C
					SC	0.046	*Type C*	D
					SC	0.041	*Type C*	D
					SC	0.029	*Type C*	B
Sydney Town (st)	very high erosion hazard; localised permanent waterlogging; highly permeable soils with low fertility	5 to 25	Group D	none	CL	0.023	*Type D*	B
					SP	0.019	*Type C*	J

Table 17 Gosford-Lake Macquarie Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					SP	0.020	*Type D*	J
Tuggerah (tg)	high wind erosion hazard; highly permeable soils with very low fertility; localised flooding and high watertable hazards	1 to 10	Group B	na	SM	0.009	*Type C*	I
					SP-SM	0.016	*Type C*	I
					SP	0.006	*Type C*	I
Tacoma Swamp (ts)	flooding, seasonal waterlogging; localised acid sulfate potential; low fertility	<3	inapplicable	na	SC-OL	0.021	*Type C*	not applicable
					SC	0.030	*Type D*	
Warners Bay (wa)	localised steep slopes and mass movement potential; mine subsidence area; seasonal waterlogging on lower slopes; low fertility	<25	Group C/D	sporadic	CH	0.015	*Type D*	F
					ML	0.019	*Type D*	A
					ML	0.025	*Type F*	A
Wollombi Brook (wl)	flooding and streambank erosion hazards; localised seasonal waterlogging; non cohesive soils with high permeability and low fertility	<5	Group B	sporadic	SP	0.024	*Type F*	I
					SP	0.033	*Type F*	J
Watagan (wn)	high mass movement and soil erosion hazards; steep slopes; localised rock outcrop	>25	Group C/D	sporadic	SW	0.024	*Type C*	J
					SW	0.036	*Type C*	J
					SC	0.034	*Type C*	B
					CL	0.022	*Type F*	A
					CL	0.024	*Type F*	A
					CL	0.019	*Type F*	A
Woodburys Bridge (wo)	extreme erosion hazard; localised seasonal waterlogging; low fertility soils with layers of low wet strength	<20	Group C/D	na	ML	0.050	*Type D*	B
					CH	0.022	*Type D*	F
					SM-SC	0.046	*Type D*	J
Woy Woy (ww)	permanently high watertables; localised flooding and soil erosion hazards; very low fertility	<5	Group A	na	SP	0.007	*Type C*	I
					SP	0.006	*Type C*	I
Wyong (wy)	flooding, seasonal waterlogging and localised streambank erosion hazards; localised potential for acid sulfate soils; poorly drained impermeable soils with low fertility	<3	Group D	na	SC-CL	0.03	*Type C*	A - B
					SC-ML	0.028	*Type F*	A - B
Yarramalong (ya)	high run-on, flooding; permanaent waterlogging; localised streambank erosion hazard; foundation hazard	<5	Group D	na	SM-SC	0.053	*Type F*	J
					CL	0.048	*Type F*	D

Table 18 Katoomba Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Ben Bullen (bb)	localised steep slopes, shallow soils, rock outcrop	5 to 40	Group C	none	CL	0.034	*Type F*	J
					SC	0.020	*Type F*	B
					SC	0.030	*Type F*	J
					SC	0.026	*Type F*	B
					SM	0.017	*Type C*	I
Boggy Creek (bc)	rock fall hazard; flood hazard; non cohesive soils; high hazard to foundations	<5	Group C	none	MH	0.058	*Type D*	D
					CL	0.038	*Type D*	D
					ML	0.052	*Type F*	I
Blue Gum (bg)	general erosion hazard; widespread non cohesive soils; localised rock falls; localised flooding in low areas	<5	Group B	none	ML	0.038	*Type F*	J
					SC-CL	Peaty	*Type F*	J
Boyd Plateau (bp)	localised shallow soils and rock outcrop	<15	Group B	none	SC	0.020	*Type F*	J
					SC	0.028	*Type F*	C
					SC	0.028	*Type F*	C
Black Range (br)	localised shallow soils and waterlogging; high foundation hazard in some areas	<10	Group C	none	SC	0.027	*Type D*	D
					ML	0.009	*Type F*	J
					CL	0.034	*Type F*	B
Cullen Bullen (cb)	high erosion hazard; high run-on to low areas; localised rock outcrop and rock fall; localised hazards for foundations	10 to 25	Group B/C	none	CL	0.052	*Type F*	J
					MH	0.057	*Type D*	I
					CL	0.034	*Type D*	B
Cedar Valley (cv)	steep slopes, shallow soils; high erosion hazard; high hazards for foundations	15 to 60	Group B	none	SM	0.054	*Type F*	J
					SM	0.055	*Type F*	J
					CL	0.025	*Type D*	B
Coxs River (cx)	high erosion hazard; flood hazard;hazards for foundations	<5	Group C	none	ML	0.061	*Type D*	J
					SM	0.027	*Type F*	I
					SP	0.010	*Type C*	I
Deanes Creek (dc)	high run-on, high watertables, waterlogging in low areas; high hazards for foundations	<5	Group C/D	none	SC	0.025	*Type F*	J
					SC	0.037	*Type D*	I
			Group D		ML	Peaty	*Type F*	I
					SC	0.043	*Type F*	C
Faulconbridge (fb)	shallow soils with localised rock outcrop	<5	Group B	none	SC	0.003	*Type F*	J
					CL	0.015	*Type F*	A
					SC	0.029	*Type F*	I

Table 18 Katoomba Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Ganbenang (gb)	high erosion hazard; seasonal waterlogging;	<10	Group D	none	SC	0.041	*Type F*	I
			Group C		CL	0.035	*Type F*	A
					SC	0.042	*Type F*	I
					CL	0.038	*Type D*	B
Gum Valley (gv)	general water erosion hazard	<25	Group B	none	CL	0.036	*Type F*	J
					CL	0.052	*Type F*	C
					ML	0.028	*Type D*	J
					CL	0.046	*Type D*	D
					CL	>0.082	*Type F*	C
Gymea (gy)	shallow soils, widespread water erosion hazard; localised steep slopes and rock fall hazard; high run-on in low areas; low fertility	10 to 25	Group C/D	none	ML	0.035	*Type F*	J
					CL	0.028	*Type D*	D
					CL	0.034	*Type D*	D
					SC	0.023	*Type D*	D
Hawkesbury (ha)	high soil erosion and mass movement hazard; steep slope, rock outcrop, shallow stony highly permeable soils with low fertility	>25	Group C	none	SM	0.024	*Type F*	J
					SC	0.060	*Type F*	C
					CL	0.033	*Type D*	B
Hassans Walls (hw)	very steep slopes, mass movement and rock falls; shallow soils and rock outcrop; high erosion hazard; general hazard for foundations	>40	Group C	none	CL	0.025	*Type F*	J
					CL	0.042	*Type D*	D
					CL	0.044	*Type D*	D
			Group B/C		SM	Peaty	*Type F*	J
Mount Irvine (ir)	no obvious constraints	<5	Group D	none	ML	Peaty	*Type F*	J
					CL	0.050	*Type F*	C
Jenolan Caves (jc)	steep slopes, shallow soils, rock outcrop and rock fall hazard; high erosion hazard	>50	Group B	none	CL	0.008	*Type F*	J
					CL	0.007	*Type F*	G
Kanangra Gorge (ka)	shallow soils and steep slopes; mass movement and rock fall hazards; high erosion hazard; localised hazards for foundations	>30		none	GC	0.045	*Type C*	D
			Group C		SM	Peaty	*Type F*	J
					SM	0.042	*Type F*	J
					SC	0.077	*Type F*	C
Kedumba (ke)	water erosion hazard	5 to 15		none	SC	0.046	*Type F*	D
					CL	0.027	*Type D*	B
					ML	0.037	*Type F*	J

Table 18 Katoomba Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Kurrajong (kg)	shallow soils; high erosion hazard; localised waterlogging and mass movement	>10	Group C	none	MH	Peaty	*Type F*	J
					CL	0.026	*Type D*	A
					CL	0.029	*Type D*	A
Kanangra Tops (kt)	shallow, non cohesive soils with rock outcrops; high wind and water erosion hazard	<10	Group A	none	SP	0.012	*Type C*	J
					SM	0.016	*Type F*	J
					CL	0.028	*Type D*	B
Lithgow (li)	high run-on to low areas; subject to localised rock fall and mine subsidence	<10	Group C	none	SC	0.040	*Type F*	J
					SM-SC	0.047	*Type F*	I
					CL	0.024	*Type F*	A
			Group D		ML	0.036	*Type F*	J
Long Swamp (ls)	low lying area subject to high run-on, high watertable and waterlogging conditions	<3	Group C	none	ML	0.021	*Type D*	J
					CL	0.019	*Type D*	A
					CL	0.046	*Type D*	D
Medlow Bath (mb)	localised shallow soils and rock outcrop contribute to areas of high erosion hazard	5 to 15	Group B	none	SC	0.022	*Type F*	J
					SC	0.025	*Type F*	I
					SC	0.032	*Type F*	J
					SW	0.035	*Type F*	J
Morong Swamps (mo)	low lying area subject to high run-on, high watertable and waterlogging	<3	Group C/D	none	ML	0.020	*Type F*	C
					SC	0.027	*Type F*	C
Marrangaroo (mr)	steep slopes and rock outcrop; permanently high watertables in low areas	<30	Group C	none	CL	0.026	*Type D*	B
					SM	0.030	*Type F*	J
					SC	0.031	*Type F*	I
					SC	0.024	*Type D*	B
Mount Sinai (ms)	shallow, non cohesive soils with rock outcrop; steep slopes and widespread rock fall hazard; general risk of wind and water erosion; general hazard for foundations	>30	Group B	none	SC	0.027	*Type F*	J
					SC	0.022	*Type F*	J
					SC	0.019	*Type F*	I
					SC	0.036	*Type F*	I
Mount Walker (mw)	steep slopes with high non cohesiveof mass movement and water erosion; localised shallow soils and rock outcrop; localised hazards for foundations	>25		none	CL	0.039	*Type F*	B
			Group B		ML	0.032	*Type F*	J
					ML	0.052	*Type D*	B
					CL	0.034	*Type F*	B
Pipers Flat (pf)	low lying areas subject to high run-on ; localised high	<5	Group C	none	MH	>0.065	*Type D*	J

Table 18 Katoomba Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	watertable and seasonal waterlogging; general hazard for foundations				CL	0.057	*Type D*	D
					SC	0.057	*Type D*	D
Round Mount (rm)	steep slopes with shallow soils and rock outcrop; general hazard for foundations	>35	Group A	none	SC	0.019	*Type F*	J
					SC	0.039	*Type F*	I
					SM-SC	0.023	*Type F*	I
Mount Tomah (to)	localised shallow soils and rock outcrop; localised steep slopes with mass movement hazard	10 to 30	Group B	none	CL	0.041	*Type F*	C
					CL	Peaty	*Type F*	J
					CL	0.084	*Type F*	C
			Group B/C		SC	Peaty	*Type F*	J
					SC	0.025	*Type F*	I
Thurat Tops (tt)	shallow soils and rock outcrop; localised areas of high erosion hazard	<15	Group D	none	ML	0.011	*Type F*	I
					MH	0.020	*Type F*	I
Warragamba (wb)	very high mass movement and soil erosion hazards; steep slopes, highly permeable soils with low fertility	>35	Group C	none	ML	0.046	*Type D*	B
					MH	0.058	*Type F*	A
					SC	0.026	*Type F*	J
Wollangambe (wo)	shallow soils with localised rock outcrop; high erosion hazard; localised steep slopes with mass movement and rock fall hazards; general hazard to foundations.	<35	Group B	none	SC	0.015	*Type F*	J
					SC	0.029	*Type F*	I
					SC	0.049	*Type F*	I
					MH	0.054	*Type D*	B

Table 19 Penrith Soil Landscapes

Soil landscape	Common constraints	Slope range	Soil hydrologic group	Acid sulfate risk	USCS class	K- factor	Sediment type	Sediment basin wall construction (earth)
Agnes Banks (ab)	high wind and soil erosion hazards; non cohesive soils with low fertility, high permeability and seasonally high watertables	0-5	Group A	no A-S data available for this sheet	na	na	*Type C*	I
Bakers Lagoon (ba) (bl)	high watertables plastic soils	0-5	not applicable		OL CL	0.051 0.043	*Type D* *Type D*	J D
Berkshire Park (bp) (bp)	impermeable waterlogged subsoils, low fertility	0-5	Group C		CL	0.048	*Type F*	A
Blacktown (bt)	soils poorly drained with low fertility, localised high plasticity and expansive subsoils	0-5	Group C		ML/CL CL CL	na 0.038 na	*Type F* *Type D* *Type D*	B G G
Burralow Swamp (bs)	high flooding hazard, seasonally high watertable, soils with high permeability and low fertility	0-10	Group B		SP SC	0.023 0.011	*Type C* *Type C*	J J
Faulconbridge (fb) (fb)	shallow, highly permeable soils with low fertility; rock outcrop	0-5	Group D		SM CL	ft 0.035	*Type C* *Type D*	J A
Freemans Reach (fr)	high flooding and streambank erosion hazards; soils with high permeability and low fertility	0-5	Group B/C		ML CL-ML CL	0.046 0.038 0.025	*Type F* *Type F* *Type D*	A B A
Gymea (gy)	shallow highly permeable soils with very low fertility; rock outcrop; localised steep slopes with high soil erosion hazard	10-25	Group C/D		SM SC CL	0.022 0.034 0.032	*Type C* *Type F* *Type D*	B&I C A
Hawkesbury (ha)	high soil erosion and mass movement hazard; steep slope, rock outcrop, shallow stony highly permeable soils with low fertility	>25	Group D		SC SC	na 0.033	*Type C* *Type F*	C C
Hazelwood (hw)	high mass movement and sheet erosion hazards; soil with high permeability, high erodibility and low fertility	>60	Group B		SM CL	0.035 0.034	*Type C* *Type F*	J A
Kurrajong (kg)	localised mass movement hazard; localised waterlogging; localised steep slopes; some soils shallow and expansive	>10	Group C		CL	0.033	*Type D*	B
Lucas Heights (lh)	stony soil, low soil fertility, low available water capacity	0-10	Group C/D		SM	0.053	*Type C*	B&I

Table 19 Penrith Soil Landscapes

Soil landscape	Common constraints	Slope range	Soil hydrologic group	Acid sulfate risk	USCS class	K- factor	Sediment type	Sediment basin wall construction (earth)
					SC	0.042	*Type D*	B
					CL	0.024	*Type F*	A
Luddenham (lu)	moderately expansive, low wet strength, localised impermeable and highly plastic subsoils	5-20	Group C		CL	0.038	*Type D*	B
					CL	na	*Type F*	A
					CL	na	*Type D*	A
Picton (pn)	high mass movement hazard; low permeability; low fertility; localised high expansion	>20	Group C		CL	na	*Type D*	D
					CL	0.034	*Type D*	B
Richmond (ri)	high soil erosion hazard (particularly at terrace edges) and localised flooding hazards; localised salinity	0-1	Group C		CL	0.059	*Type F*	A
South Creek (sc)	high flooding hazard; localised permanently high watertables; low fertility; localised salinity	0-5	Group C/D		CL	0.05	*Type F*	A
Upper Castlereagh (up)	very high soil erosion hazard; dispersible, impermeable soil layers	0-5	Group C/D		SC	na	*Type D*	D
					CL	0.032	*Type F*	D
Volcanic (vo)	moderately expansive soils with low wet strength, high soil erosion and mass movement hazards on steep slopes	5-60	Group C/D		CL	0.029	*Type F*	B
Warragamba (wb)	very high mass movement and soil erosion hazards; steep slopes, highly permeable soils with low fertility	>35	Group C		SM	0.036	*Type C*	J
					SC	0.032	*Type D*	B
Woodlands (wl)	soils with low fertility and low water holding capacity	0-10	Group B/D		CL	0.029	*Type F*	C
					CL	na	*Type F*	B

Table 20 Sydney Soil Landscapes

Soil landscape	Common constraints	Slope range	Soil hydrologic group	Acid sulfate risk	USCS class	K- factor	Sediment type	Sediment basin wall construction (earth)
Birrong (bi)	localised high flooding and erosion hazard; saline subsoils, seasonal waterlogging, very low soil fertility	0-3	Group C	no A-S data available for this sheet	CL CL-CH SC	0.047 0.015 0.031	*Type D* *Type D* *Type D*	D D D
Blacktown (bt)	soils poorly drained with low fertility, localised subsoil, moderately expansive, highly plastic	0-5	Group C		CL CL CL-CH	0.038 na na	*Type D* *Type D* *Type D*	B D B
Cockle Bay (cb)	very high soil erosion and high water run-on hazards; high watertable, seasonally waterlogged soils with low fertility	0-5	Group B		SM CL CL	 0.036	*Type C* *Type D* *Type D*	J D D
Deep Creek (dc)	high flooding, soil erosion and sedimentation hazards; permanently high watertables and localised very low fertility	0-3	Group B/C		SP	0.002	*Type C*	I
Erina (er)	very high soil erosion and localised high water run-on hazards; impermeable, plastic clays with low wet strength, seasonal waterlogging on the footslopes	0-20	Group C/D		ML CL CL CL	na 0.028 0.042 na	*Type C* *Type D* *Type D* *Type D*	A B B A
Ettalong (et)	high flooding hazard; permanently high watertable; extremely acid organic layers with low fertility	0-2	not applicable		PT SM	na 0.019	 *Type C*	J I
Faulconbridge (fb) (fb)	shallow, highly permeable soils with low fertility; rock outcrops	0-5	Group D		SM SM	ft 0.053	*Type C* *Type C*	J B&I
Glenorie (gn)	high soil erosion hazard; localised impermeable highly plastic subsoils, moderately expansive	5-20	Group C		ML-CL CL CL	0.025 0.04 na	*Type F* *Type D* *Type D*	C C D
Gymea (gy)	shallow highly permeable soils with very low fertility; rock outcrop; localised steep slopes with high soil erosion hazard	10-25	Group C/D		SM SC ML-CL	0.018 0.025 0.046	*Type C* *Type F* *Type D*	B&I C B
Hawkesbury (ha)	high soil erosion and high mass movement hazard; steep slope, rock outcrop; shallow, stony, highly permeable soils with low fertility	>25	Group D		SM SM SM	0.024 0.027 0.025	*Type C* *Type D* *Type F*	B&I B&I B&I

Table 20 Sydney Soil Landscapes

Soil landscape	Common constraints	Slope range	Soil hydrologic group	Acid sulfate risk	USCS class	K- factor	Sediment type	Sediment basin wall construction (earth)
Hornsby (ho)	highly plastic low wet strength, highly expansive subsoil; steep slope; localised mass movement hazard	3-65	Group C/D		CH SC CL-CH	0.013 0.023 0.017	*Type D* *Type C* *Type D*	A C B&D
Lambert (la)	very high soil erosion hazard; rock outcrop, seasonally perched watertable; highly permeable soils with very low soil fertility	0-20	Group D		SC SM CL	0.027 0.018 0.037	*Type C* *Type C* *Type D*	C J B
Lane Cove (lc)	high flooding and soil erosion hazards; seasonal waterlogging	0-5	Group B		SC	0.019	*Type C*	B
Lucas Heights (lh) (lh)	stony soils, low fertility, low available water capacity	0-10	Group C/D		SM SC CL	na 0.042 0.024	*Type C* *Type D* *Type F*	B&I B B
Mangrove Creek (mc)	regular tidal flooding; high acid sulfate potential, saline highly organic soils with low fertility	0-3	not applicable		SP-SM SC CL SP	0.01 0.034 0.024 0.007	*Type C* *Type D* *Type F* *Type C*	I D C J
Narrabeen (na)	high wind and wave erosion hazards; non cohesive, highly permeable soils with low fertility	0-45	Group A		SP SP-SC	0.007 0.006	*Type C* *Type C*	I na
Newport (np)	very high erosion hazard; localised steep slopes; non cohesive topsoils with low fertility	0-35	Group B		SM	0.042	*Type C*	J
North Head (nh)	high wind and water erosion hazards; non cohesive, highly permeable soils with very low fertility	0-15	Group A		SC SP-SM SP	0.013 0.011 0.009	*Type C* *Type C* *Type C*	B J I
Oxford Falls (of)	very high erosion hazards, perched watertables; highly permeable soils with very low fertility; localised rock outcrop	0-15	Group C/D		SM SM SP-SM	0.023 0.021 0.018	*Type C* *Type C* *Type C*	I C&I I
Somersby (so)	highly permeable soils with low fertility, localised high watertables; localised stony topsoils	0-15	Group B		SM CL-CH [AC]	0.027 ft 0.046	*Type C* *Type D* *Type D*	I C B
Tuggerah (tg)	high wind erosion hazard; non cohesive highly permeable soils with very low fertility, localised flooding hazard and	1-10	Group B		SM SP-SM	0.009 0.016	*Type C* *Type C*	I J

Table 20 Sydney Soil Landscapes

Soil landscape	Common constraints	Slope range	Soil hydrologic group	Acid sulfate risk	USCS class	K- factor	Sediment type	Sediment basin wall construction (earth)
	permanently high watertable				SP	0.006	*Type C*	I
Warriewood (wa)	localised high run-on and flooding hazards; high watertables; highly permeable soils	0-3	Group A		SP	0.018	*Type C*	I
Watagan (wn)	high mass movement and soil erosion hazards; steep slopes; occasional rock outcrop	>25	Group C/D		SM SC CL-CH CH	0.043 0.034 0.027 0.021	*Type C* *Type C* *Type D* *Type D*	J B B D
West Pennant Hills Hills (wp)	high mass movement and soil erosion hazards; steep slopes; localised seasonal waterlogging, highly impermeable plastic layers with high volume expansion potential	>20	Group C/D		CL CL-CH	0.026 0.022	*Type F* *Type D*	A B
Woy Woy (ww)	permanently high watertables; localised flooding soil erosion hazards; low to very low fertility	0-5	Group C		SP SP	0.005 na	*Type C* *Type C*	I I

Table 21 Wollongong-Part Hacking Soil Landscapes

Soil Landscape	Common constraints	Slope range	Soil hydrologic group	Acid sulfate risk	USCS class	K- factor	Sediment type	Sediment basin wall construction (earth)
Berkeley (bk)	mass movement hazard, extreme erosion hazard, expansive soils, locally impeded drainage	10-50	Group C	no A-S data available for this sheet	CL	0.022	*Type D*	D
Blacktown (bt)	soils poorly drained with low fertility, localised plastic subsoils with moderate volume expansion	0-5	Group C		CL CL	0.038 na	*Type F* *Type D*	A G
Bundeena (bu)	high erosion hazard, highly permeable soil, very low fertility, localised seasonally high watertable	0-20	Group D		SW	0.018	*Type C*	J
Fairy Meadow (fm)	high flooding hazard; highly permeable soils, seasonally high watertables, low wet bearing strength and low fertility	0-5	Group B		SP-SM CL CH ML	0.025 0.024 0.024	*Type C* *Type F* *Type F* *Type F*	I C C na
Faulconbridge (fb)	shallow highly permeable soils with low fertility; rock outcrop	0-5	Group D		CL SM SM-SW	0.035 0.053	*Type D* *Type C* *Type C*	na I&J I
Gwynneville (gw)	extreme erosion hazard, steep slopes, mass movement hazard, local flooding; subsoils expansive and impermeable with low wet bearing strength	3-25	Group C/D		ML CL	0.025 0.024	*Type F* *Type D*	A A
Gymea (gy)	shallow, highly permeable soils with very low fertility; rock outcrop; localised steep slopes with high erosion hazard	10-25	Group C/D		SM SC CL	0.022 0.034 0.042	*Type C* *Type F* *Type D*	B&I C A
Hawkesbury (ha)	high soil erosion and high mass movement hazard; steep slope, rock outcrop; shallow, stony, highly permeable soils with low fertility	>25	Group D		GM SC SC	0.024 0.033 na	*Type C* *Type D* *Type F*	B&I C C
Illawarra Escarpment (ie)	mass movement and rock fall hazard; steep slopes and extreme erosion hazard; soils are reactive with low wet bearing capacity and low to moderate fertility	20-50	Group D		CL ML	0.033 na	*Type D* *Type C*	B B
Kurnell (kn)	extreme wind erosion hazard; highly permeable soils with low fertility and localised permanently high watertables	1-10	Group A		SC	na	*Type C*	K

Table 21 Wollongong-Part Hacking Soil Landscapes

Soil Landscape	Common constraints	Slope range	Soil hydrologic group	Acid sulfate risk	USCS class	K- factor	Sediment type	Sediment basin wall construction (earth)
Lucas Heights (lh)	stony soils, low fertility, low available water capacity	0-10	Group C/D		CH CL CL	na 0.024 na	*Type D* *Type F* *Type F*	B C C
Luddenham (lu)	moderately expansive, low wet strength, localised impermeable and highly plastic clays	5-20	Group C/D		CL CL	0.038 na	*Type D* *Type F*	A A
Maddens Plains (md)	seasonal and permanent waterlogging, low fertility and high erosion hazard	0-10	Group B		SW SC	0.03 0.035	*Type C* *Type C*	I B
Mangrove Creek (mc)	regular tidal flooding; high acid sulfate potential, saline highly organic layers with low fertility	0-3	not relevant		CL SM SP-SM SC	0.024 na 0.016 0.034	*Type F* *Type C* *Type C* *Type D*	C I I D
Monkey Creek (mk)	flood hazard, low permeability; reactive soils with low fertility	1-2	Group C/D		CL CL	0.027 na	*Type F* *Type F*	B B
Picton (pn)	high mass movement hazard; low permeability and low fertility, local highly expansive	>20	Group C/D		CL	0.034	*Type D*	D
Theresa Park (tp)	localised flooding seasonal waterlogging; very high soil erosion hazard	0-10	Group B/C		variable	0.039	*Type F*	variable
Warragamba (wb)	very high mass movement and high soil erosion hazards; steep slopes; highly permeable soils and low fertility	>35	Group D		SM SC CL	0.036 0.032	*Type C* *Type D* *Type F*	I B A
Watagan (wn)	high mass movement and high soil erosion hazards; steep slopes; occasional rock outcrop	>25	Group D		SC SM CL	0.034 0.043 0.019	*Type C* *Type C* *Type F*	B I B
Wollongong (wg)	extreme wind erosion hazard; localised flooding and permanently high watertables; non cohesive highly permeable soils with low fertility	3-35	Group A		SP SW	0.042 na	*Type C* *Type C*	I I
Yarrawarrah (ya)	highly permeable soils with permanently high watertables; shallow soils; low wet strength; high erosion hazard; very low fertility	5-20	Group D		SM SC-CL CL	0.029 0.041 0.022	*Type C* *Type F* *Type D*	J B D

Table 22 Kiama Soil Landscapes

Soil landscape	Common constraints	Slope range	Soil hydrologic group	Acid sulfate risk	USCS class	K- factor	Sediment type	Sediment basin wall construction (earth)
Albion Park (ap)	waterlogging; seasonally high watertable; high expansion	5-15	Group C	no A-S data available for this sheet	CL GM CL	0.026 0.035 na	*Type D* *Type C* *Type D*	D J K
Barren Grounds (ba)	waterlogging; permanent high watertable; low fertility	0-10	Group D		SM SC	0.015 0.043	*Type C* *Type F*	J B
Barrengarry (bg)	localised mass movement; water erosion; localised run-on hazards	10-13	Group B		CL CL	0.03 na	*Type F* *Type F*	C C
Bombo (bo)	rock fall, rock outcrop; wave erosion hazard; low wet strength	15-25	Group B		CL [AC]	ft	*Type F*	A
Cambewarra (ca)	rock fall, mass movement, extreme water erosion hazards; shallow soils; low wet strength	>30	Group C		CL [AC]	ft	*Type F*	C
Coolongatta (co)	water erosion hazard; localised mass movement, surface movement potential; high expansion potential	5-20	Group C		CH [AC] CL	0.02 0.038	*Type F* *Type F*	C C
Ellerslie (el)	flooding hazard; permanent high watertable; layers with low permeability and low wet strength	0-5	Group C		CL ML SM	0.052 0.06 0.034	*Type D* *Type C* *Type C*	B A B&I
Fairy Meadow (fa)	high flooding hazard, high permeability soils, high seasonal watertables, low wet bearing strength, low fertility	0-5	Group A/B		SC CL ML	na 0.024 0.024	*Type C* *Type F* *Type F*	B A A
Fountaindale (fo)	localised water erosion hazard; run-on; localised mass movement hazard; moderately expansive	0-20	Group C		ML CL	0.026 0.014	*Type F* *Type F*	A B
Greenwall Point (gp)	localised shallow soil and rock outcrop; moderately expansive	>3	Group C		ML CL [AC]	0.042 0.023	*Type F* *Type F*	A C
Hawkesbury (ha)	high soil erosion and high mass movement hazard; steep slopes, rock outcrop; shallow, stony, highly permeable soils with low fertility	>25	Group D		SM CL	0.024 0.033	*Type C* *Type F*	B&I A
Illawarra Escarpment Escarpment (es)	mass movement and rock fall hazard; steep slopes and extreme erosion hazard; soils are expansive with low wet	20-50	Group D		ML ML	na na	*Type C* *Type C*	A C

Table 22 Kiama Soil Landscapes

Soil landscape	Common constraints	Slope range	Soil hydrologic group	Acid sulfate risk	USCS class	K- factor	Sediment type	Sediment basin wall construction (earth)
	strength and low to moderate fertility				CL	0.033	*Type F*	C
Jamberoo (ja)	very high surface run-on	0-25	Group B		CL [AC]	ft	*Type F*	C
Kiama (ka)	high run-on and low permeability; localised mass movement hazard; subsoils are sodic with low wet bearing strength and moderate expansion	0-20	Group B/C		ML-CL CL [AC]	0.04 0.018	*Type F* *Type F*	A C
Killallea (ki)	flood hazard, waterlogging, low permeability and permanently high watertable; high expansion potential	0-3	Group C		OL ML	0.023 0.034	*Type F* *Type F*	J A
Nowra (no)	low permeability and low wet bearing strength; high run-on; localised shallow soils with localised rock outcrop	>5	Group C		ML CL [AC]	0.047 0.02	*Type F* *Type D*	A A
Pulpit Rock (pr)	steep slopes, mass movement hazard; shallow soils with rock outcrop and low available water-holding	>30	Group D		SW SM CL	0.015 0.033 0.031	*Type C* *Type C* *Type D*	I J B
Robertson (ro)	localised steep slopes; high permeability; sodic layers	0-20	Group B		CL ML [AC]	0.026 0.01	*Type F* *Type F*	C C
Seven Mile (sm)	non cohesive soils with wind erosion potential; includes sodic saline layers with low fertility and very low water holding capacity	0-20	Group A		SW SC-CL CL	0.043 0.045 0.039	*Type C* *Type F* *Type D*	J B C
Shellharbour (sh)	localised water erosion hazard, shallow soil and mass movement; subsoils are highly expansive with low permeability and low wet strength; generally sodic	0-20	Group C		CL SC-CL	0.035 0.024	*Type D* *Type D*	D D
Shoalhaven (sf)	flood hazard, seasonal waterlogging and permanently high watertables; subsoils have acid sulfate potential and are strongly acid	0-3	Group C	common	ML CL	0.039	*Type F* *Type F*	C C
Wattamolla Road (wr)	localised mass movement hazard and high surface water run-on; soils have low wet bearing strength	5-15	Group B/C		CL	ft	*Type D*	A

Table 22 Kiama Soil Landscapes

Soil landscape	Common constraints	Slope range	Soil hydrologic group	Acid sulfate risk	USCS class	K- factor	Sediment type	Sediment basin wall construction (earth)
Wildes Meadow (wm)	surface movement potential and localised mass movement hazard; localised seasonal waterlogging; water erosion hazard; soils are strongly acid	10-20	Group C		CL [AC]	ft	*Type F*	C
Wingecarribee (wi)	high run-on and waterlogging; permanently high watertables and low wet bearing strength	0-3	Group C/D		ML CL	0.039 0.026	*Type F* *Type D*	A B
Wollongong (wg)	extreme wind erosion hazard; localised flooding and permanently high watertables; non cohesive highly perme_able soils with low fertility	3-25	Group A		SP	0.042	*Type C*	I

Table 23 Wagga Wagge Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Belfrayden (be)	Group B	none	0.00	ML	0.054	*Type F*	B
				CL	0.059	*Type F*	C
				CL	0.018	*Type F*	C
	Group C			CL	0.045	*Type F*	B
				CL	0.058	*Type F*	B
				CL	0.047	*Type F*	B
	Group B			SM	0.027	*Type F*	J
				SM-ML	0.046	*Type F*	J/B
				CL	0.010	*Type F*	G
				CH	0.013	*Type D*	G
Becks Lane (bk)	Group D	none	0.00	ML	0.056	*Type F*	B
				CL	0.044	*Type F*	B
				CL	0.025	*Type F*	A
	Group C			ML	0.059	*Type D*	J
				ML	0.053	*Type D*	D
				CL	0.037	*Type F*	B
	Group C			ML	0.058	*Type F*	J
				ML	0.064	*Type F*	B
				CL	0.024	*Type F*	A
Benloch (bl)	Group B	none	0.00	CL	0.038	*Type F*	B
				CL	0.026	*Type F*	C
				CL	0.063	*Type F*	G
	Group B			ML	0.062	*Type F*	J
				ML	>0.083	*Type D*	I
				CH	0.018	*Type D*	D
				CL	0.037	*Type D*	D
Bullenbong Road (br)	Group B	none	0.00	ML	0.059	*Type F*	J
				ML	0.073	*Type F*	I
				CL	0.065	*Type F*	B
				CL	0.061	*Type F*	B
Big Springs (bs)	Group B	none	0.00	SM	0.052	*Type F*	J
				SM	0.043	*Type F*	J
				CL	0.039	*Type F*	A
				SC-CL	0.042	*Type F*	B/A
Bullenbong Plain (bu)	Group D	none	0.00	OL	0.015	*Type D*	J
				CL	0.023	*Type D*	B
				CL	0.020	*Type D*	B
	Group D			CL	0.045	*Type D*	D
				CH	0.024	*Type D*	D
				CH	0.033	*Type D*	D
Currawarna (cw)	Group A	none	0.00	SP	0.037	*Type F*	I
				SP	0.027	*Type F*	J
				SP	0.027	*Type F*	J
East Bomen (eb)	Group D	none	0.00	CL	0.045	*Type F*	B
				CL	0.030	*Type F*	C
				CL	0.033	*Type F*	C
	Group C/D			SC	0.035	*Type F*	C
				CL	0.045	*Type F*	C
				SC-CL	0.045	*Type F*	B
				SC	0.032	*Type F*	B
				SC	0.030	*Type F*	B
				CL	0.020	*Type D*	A
	Group C			ML	0.050	*Type F*	A
				CL	0.042	*Type F*	B

Table 23 Wagga Wagge Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
Farnham (fa)	Group C	none	0.00	OL	0.023	*Type D*	J
				CL	0.025	*Type D*	B
				SM	0.019	*Type F*	J
Forest Hill (fh)	Group C	none	0.00	ML	0.046	*Type F*	J
				CL	0.048	*Type F*	B
				CL	0.024	*Type F*	C
				CL	0.022	*Type F*	C
Grubben (gb)	Group C	none	0.00	ML	0.044	*Type F*	J
				ML	0.064	*Type D*	E
	Group C/D			ML	0.048	*Type F*	J
				ML	0.064	*Type F*	A
				CL	0.032	*Type D*	B
Glenmornon (gl)	Group C/D	none	0.00	SM	0.046	*Type F*	I
				SC	0.025	*Type F*	B
				CL	0.017	*Type F*	G
	Group B			SC	0.030	*Type F*	J
				SM	0.044	*Type F*	J
				CL	0.043	*Type F*	C
Gregadoo (gr)	Group A/B	none	0.00	ML	0.065	*Type F*	J
				SM	0.062	*Type F*	J
				SC-CL	0.036	*Type F*	B/A
	Group B			SM	0.038	*Type F*	J
				SM	0.040	*Type F*	J
				CL	0.040	*Type D*	D
Kyeamba Downs (kd)	Group A/B	none	0.00	SM	0.033	*Type F*	J
				SM	0.040	*Type F*	J
				CL	0.027	*Type F*	A
				CL	0.016	*Type F*	A
	Group B/C			ML	0.043	*Type D*	J
				SM-SC	0.048	*Type F*	J/B
				CH	0.011	*Type F*	C
Kurrajong Plain (kp)	Group C/D	none	0.00	ML	0.045	*Type D*	B
				MH	0.047	*Type D*	A
				ML	0.052	*Type D*	B
				ML	0.054	*Type F*	A
Lloyd (ld)	Group C	none	0.00	ML	0.041	*Type F*	J
				ML	0.052	*Type D*	B
				CL	0.022	*Type D*	A
				CL	0.037	*Type F*	B
				ML	0.054	*Type D*	J
				ML	0.064	*Type D*	D
				CL	0.030	*Type D*	B
	Group B/C			SM-ML	0.047	*Type F*	B&I/A
				CL	0.016	*Type F*	C
				CH	0.010	*Type F*	C
	Group C			SM	0.036	*Type F*	J
				SM	0.052	*Type D*	J
Livingstone (li)	Group B/C	none	0.00	ML	0.054	*Type F*	J
				SM	0.051	*Type F*	J
				CL	0.020	*Type F*	A
	Group B			SM-ML	0.053	*Type F*	J
				SM	0.059	*Type F*	J

Table 23 Wagga Wagge Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
				CL	0.050	*Type D*	D
				OL	0.039	*Type F*	J
				ML	0.049	*Type F*	A
Mangoplah (ma)	Group B/C	none	0.00	ML	0.048	*Type F*	J
				MH	>0.081	*Type D*	E
				CL	0.024	*Type D*	G
				CL	0.037	*Type D*	D
Mount Flakney (mf)	Group C	none	0.00	SM	0.030	*Type F*	J
				SM	0.032	*Type F*	J
				SM	0.042	*Type F*	J
				SC-CL	0.038	*Type F*	B/A
O'Briens Creek (ob)	Group C/D	none	0.00	ML	0.067	*Type D*	J
				ML	0.062	*Type D*	D
				CL	0.022	*Type D*	A
				ML	0.057	*Type D*	J
				ML	>0.084	*Type D*	E
				CL	>0.086	*Type F*	C
				CL	0.028	*Type D*	B
	Group B/C			ML	0.062	*Type D*	J
				ML	0.067	*Type D*	B
				CL	>0.087	*Type F*	C
				CL	0.033	*Type F*	A
Pearson (pe)	Group C/D	none	0.00	CL	0.050	*Type F*	J
				ML	0.057	*Type D*	D
				CH	0.011	*Type F*	C
				CL	0.018	*Type D*	A
	Group B			CL	0.036	*Type F*	C
				CH	0.050	*Type F*	H
				CH	0.051	*Type F*	C
Pulletop (pu)	Group B/C	none	0.00	ML	0.057	*Type F*	J
				ML	0.078	*Type D*	I
				CL	0.026	*Type F*	A
				CL	0.029	*Type D*	A
	Group C/D			ML	0.067	*Type F*	J
				ML	0.072	*Type F*	B
				CL	0.027	*Type F*	A
				CL	0.027	*Type F*	A
	Group B			ML	0.061	*Type F*	A
				CL	0.064	*Type F*	C
				CL	0.064	*Type F*	C
	Group C/D			ML	0.059	*Type F*	J
				ML	0.062	*Type D*	I
				CL	0.025	*Type F*	A
Redbank (rb)	Group B/C	none	0.00	ML	0.057	*Type F*	J
				ML	0.072	*Type F*	B
				CL	0.019	*Type F*	A
				CL	0.017	*Type F*	G
	Group B/C			ML	0.045	*Type F*	A
				ML	0.065	*Type D*	I
				CH	0.024	*Type D*	F
Rockedge (re)	Group B	none	0.00	ML	0.061	*Type F*	J
				SP	0.066	*Type F*	J
				ML	0.065	*Type F*	J
				ML	0.071	*Type F*	I

Table 23 Wagga Wagge Soil Landscapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	Percent area of low acid sulfate soil risk*	USCS class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
				ML	0.048	*Type D*	D
Rio Grande (ri)	Group B	none	0.00	CL	0.044	*Type F*	I
				SC	0.049	*Type F*	B
				CL	0.026	*Type F*	A
	Group D			ML	0.044	*Type F*	J
				GM	0.065	*Type F*	I
The Rock (ro)	Group C/D	none	0.00	SC	Peaty	*Type F*	J
				SC	0.024	*Type F*	C
				SP	0.040	*Type F*	J
				SP	0.047	*Type F*	I
Roping Pole (rp)	Group D	none	0.00	CL	0.025	*Type D*	B
				CH	0.014	*Type D*	F
				CH	0.010	*Type D*	G&F
Vincent Road (vi)	Group B	none	0.00	SM-ML	0.055	*Type F*	J
				ML	0.070	*Type D*	I
				CL	0.039	*Type F*	B
	Group B/C			ML	0.062	*Type F*	J
				CL	0.069	*Type F*	I
				CL	0.034	*Type D*	D
Waverley (wa)	Group B/C	none	0.00	ML	0.044	*Type F*	J
				ML	0.065	*Type F*	B
				CL	0.026	*Type F*	A
				CH	0.019	*Type F*	C
Woomabrigong (wo)	Group C	none	0.00	SM	0.034	*Type F*	J
				CL	0.036	*Type F*	B
				CL	0.015	*Type F*	A
				CL	0.020	*Type F*	A
Yarragundry (ya)	Group B/C	none	0.00	SM	0.046	*Type F*	J
				SC	0.033	*Type F*	B
				SM	0.045	*Type F*	J
				SM	0.050	*Type F*	J
				SM	0.051	*Type F*	J
				CL	0.018	*Type F*	C
				CL	0.017	*Type F*	A
				CL	0.023	*Type F*	A
				CL	0.025	*Type D*	A
				SC	0.034	*Type D*	B
				CH	0.016	*Type D*	H&F
				ML-OL	0.045	*Type F*	J

* Low risk, not no risk

Table 24 Canberra Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Allianoyonyiga (al)	steep slopes with frequent rock outcrop, permanently high water tables in drainage areas, localised waterlogging on lower slopes, weak dispersible subsoil and hardsetting topsoil	20 to 40	Group C	none	OL	0.034	*Type F*	J
					SM-ML	0.030	*Type D*	J
					SM	0.045	*Type D*	B&I
					ML	0.046	*Type F*	A
					ML	0.056	*Type F*	B
					ML	0.060	*Type F*	D
Burra (ba)	erodible footslopes with high run-on; generally infertile, hardsetting topsoils with weak or dispersible subsoils common	5 to 30	Group C	none	SM	0.027	*Type F*	J
					SM-ML	0.031	*Type D*	J
					SM	0.047	*Type F*	J
					CL	0.058	*Type F*	C
					CL	0.037	*Type D*	B
					SM	0.051	*Type D*	J
Bennison (be)	generally erodible, shallow stony infertile soils, occurring frequently on steep slopes subject to mass movement and rock outcrop,	10 to 40	Group C	none	SM	0.026	*Type F*	J
					SM	0.021	*Type F*	J
					SM	0.046	*Type F*	J
					SC-CL	0.042	*Type D*	C
					CL	0.046	*Type D*	B
Bullen Range (bg)	generally steep, stony, erodible, hillslopes with frequent rock outcrop and low water holding capacity; localised waterlogging, seepage, salinity and gully erosion affecting lower areas; infrequent mass movement on steepest slopes	>25	Group D	none	GM-SM	0.008	*Type C*	J
			Group C		SM	0.024	*Type F*	J
					CL	0.023	*Type F*	A
Bollara (bo)	shallow hard-setting soils with low wet strength; arranged on low rolling hills with seasonal waterlogging and scalding in valleys and lower slopes; localised salinity and rock outcrop	10 to 30	Group C	none	SM-ML	0.028	*Type F*	J
					SM	0.038	*Type F*	B&I
					CL	0.042	*Type D*	B
Bywong (by)	shallow, infertile soils with high erodibility and abrupt rock outcrop; hard-setting, high run-on to lower slopes contributing to high erosion and salinity hazards; dispersible subsoils	3 to 20	Group B	none	SM	0.037	*Type F*	J
			Group C		SM-ML	0.041	*Type D*	J
					SM	0.046	*Type D*	J
					CL	0.028	*Type D*	A
					SM-ML	0.054	*Type D*	J/E
					ML	0.056	*Type D*	B
Bungendore (bz)	hardsetting, dispersible soils on poorly drained footslopes, general watrlogging and localised salinity	<5	Group B/C	none	ML	0.062	*Type D*	J
					ML	0.062	*Type F*	A
					CL	0.043	*Type F*	B

Table 24 Canberra Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Campbell (ca)	rounded, steep, stony hills with rock outcrops, terracettes and vertical tuffs;shallow soils are hardsetting, infertile and erodible; localised waterlogging associated with weak impermeable subsoils on lower slopes	>20	Group B/C	none	ML	0.053	*Type D*	J
					OL	0.018	*Type F*	J
					ML	0.042	*Type D*	I
					SM	0.036	*Type F*	I
					CH	0.054	*Type F*	C
					CL	0.039	*Type F*	D
Celeys Creek (cc)	low rolling hills, granite tors; shallow, infertile, permeable, coarse grained topsoils; subsoils display poor water holding, and seasonal waterlogging	10 to 32	Group B	none	SM	0.023	*Type F*	J
					SM	0.027	*Type D*	J
					SM	0.022	*Type D*	J
					SM	0.027	*Type F*	J
					SC-CL	0.025	*Type F*	B
					SC	0.022	*Type D*	B
Coopers (cp)	remnant dunes and beaches; deep, coarse erodible topsoils with poor water holding; localised seasonal waterlogging and water table pollution associated with poorly draining subsoils; some wind erosion	na (est 30)	Group A	none	SM-ML	0.011	*Type D*	J
			Group B		SM	0.025	*Type D*	J
					SM	0.016	*Type D*	J
					SM	0.025	*Type F*	J
					SM	0.036	*Type F*	J
					SM		*Type F*	K
					ML	0.061	*Type D*	D
Clear Range (cr)	rugged mountains with steep slopes, rock outcrop and granite tors; sporadic rock falls and mass movement; coarse freely-draining soils; high run-on to lower slopes	>20	Group B	none	SM	0.033	*Type F*	J
					SM	0.032	*Type D*	J
					SM	0.049	*Type F*	J
			Group C		SM	0.030	*Type D*	J
					SM	0.047	*Type F*	J
Foxlow (fo)	steep, stony colluvial slopes;highly erodible shallow soils, localised waterlogging and rock outcrop	>20	Group D	none	SM	0.028	*Type F*	J
			Group C		SM	0.022	*Type D*	J
					SM	0.040	*Type F*	J
					ML	0.053	*Type D*	D
					SC	0.037	*Type F*	B
Franklin (fr)	erodible topsoils, poorly-drained, dispersible subsoil; high run-on, frequent waterlogging	2 to 5	Group C	none	ML	0.042	*Type F*	J
					SC	0.049	*Type F*	B
					SC	0.038	*Type F*	B
					CH	0.022	*Type D*	G
					ML	0.048	*Type D*	J
					ML	0.058	*Type D*	B

Table 24 Canberra Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					CL	0.021	*Type D*	G
Ginninderra Creek (gc)	undulating floodplain; poorly drained; high run-on, flood prone areas; high erodibility; low wet strength	<3	Group C/D	none	ML	0.049	*Type F*	J
					CL	0.046	*Type D*	B
					CL	0.043	*Type D*	D
			Group A		ML	0.041	*Type F*	J
					ML	0.053	*Type F*	B
Gundaroo (gd)	narrow floodplains; poor drainage; high run-on, flood prone areas; highly erodible; low wet strength	<3	Group C	none	ML	0.051	*Type F*	J
					ML	0.079	*Type D*	D
					ML	0.059	*Type F*	E
					CL	0.043	*Type F*	A
					CL	0.043	*Type F*	A
			Group C		ML	>0.060	*Type D*	J
					ML	0.050	*Type D*	A
					ML	0.066	*Type D*	B
			Group B		ML	0.055	*Type D*	J
					ML	0.052	*Type D*	A
					ML	0.052	*Type D*	B
					CH	0.033	*Type D*	D
Halfway Creek (hf)	confined flowlines; poor drainage; high run-on, concentrated flow; flood prone areas; highly erodible; low wet strength	<3	Group C	none	ML	0.043	*Type F*	J
					ML	0.045	*Type F*	A
					CL	0.054	*Type F*	B
Hammonds Hill (hh)	shallow soils with intermittent rock outcrop; localised waterlogging; highly erodible soils; low strength subsoils	>20	Group B/C	none	OL	0.028	*Type F*	J
					CL	0.027	*Type F*	G
					SM-ML	0.058	*Type F*	I
					CH	0.018	*Type D*	F
Hoskinstown (hs)	shallow soils with frequent rock outcrop; seasonal waterlogging and localised saline scalding; highly erodible; poorly drained plastic clay subsoils have low wet strength	2 to 10	Group B/C	none	SM	0.043	*Type F*	J
					CH	0.069	*Type F*	C
					CH	>0.079	*Type F*	C
			Group B/C		ML	0.045	*Type D*	J
					CL	0.052	*Type D*	D
					CL	0.038	*Type D*	A
Jones Point (jp)	highly erodible soils with dispersible subsoils; saline seeps and low wet strength subsoils	<1	Group C	none	SC-CL	0.039	*Type D*	J
					SC	0.040	*Type D*	D
					SM	0.026	*Type F*	J

Table 24 Canberra Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Lake George Escarpment (le)	steep slopes, shallow stony soils and frequent rock outcrops; mass movement and rockfall hazards; high erodibility; run-on concentrated in poorly drained alluvial fans;	32 to 56	Group B/C	none	GM-SM	Peaty	*Type C*	J
					GM-SM	0.043	*Type F*	J
					ML	0.028	*Type F*	J
					CL	0.032	*Type D*	A
					ML	0.043	*Type D*	A
Luxor (lu)	colluvial slopes; poor drainage, localised waterlogging; some low wet-strength plastic clay subsoils with some dispersible and saline examples;	<20	Group B	none	SM	0.030	*Type F*	J
					SM	0.032	*Type D*	J
					CH	0.020	*Type F*	A
					ML	0.095	*Type F*	C
Molonglo (mg)	poorly drained floodplain with some plastic clays subsoils, permanently high water tables and seasonal waterlogging; highly erodible soils; concentrated run-on, flood hazards; polluted sediments; low wet strength	<3	Group C	none	OL	0.025	*Type F*	J
					CL	0.046	*Type D*	B
					CL	0.050	*Type D*	B
					CL	>0.093	*Type F*	C
Macanally Mountain (mm)	steep stony terrain with shallow soils; highly erodible hard-setting soils with dispersible subsoils;	10 to 30	Group B/C	none	SM	Peaty	*Type F*	J
					ML	0.049	*Type D*	E
					CL	0.030	*Type D*	B
					SC-CL	0.033	*Type F*	B
					CL	0.058	*Type F*	C
			Group A/B		SM	0.034	*Type F*	J
					SM	0.027	*Type D*	J
Millpost (mp)	localised poor drainage and flood hazard, permanently high watertables and seasonal waterlogging; concentrated surface flows; localised salinity and seepage flows; dispersible subsoils with low wet strength	<2	Group C	none	ML	0.057	*Type F*	J
					ML	>0.077	*Type D*	E
					CL	0.026	*Type D*	D
					CL	0.026	*Type D*	E
Mills Cross (mx)	stagnant areas of hard-setting erodible topsoils with frequently dispersible subsoils; some localised water logging and salinity;	<3	Group C/D	none	OL	>0.040	*Type D*	J
					ML	>0.066	*Type F*	B
					CH	0.031	*Type D*	F
					CH	0.026	*Type D*	F
			Group D		ML	>0.058	*Type D*	J
					CL	0.064	*Type D*	B
					ML	0.052	*Type D*	A
Paddy's River (pd)	erodible, non cohesive coarse soils; highly susceptible to gully erosion; localised wind erosion	na	Group A	none	SP-SM	0.000	*Type C*	J
					SM	0.009	*Type C*	I

Table 24 Canberra Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					SP	0.000	*Type C*	J
Pialligo (pi)	coarse, infertile, non-cohesive, wind-blown sediment ; extremely erodible materials subject to high run-on and flooding; seasonal waterlogging;	<3	Group B/C	none	ML	0.032	*Type F*	J
					ML	0.045	*Type F*	A
			Group C		ML	0.037	*Type F*	J
					CL	0.032	*Type F*	G
					ML	0.043	*Type F*	A
					ML	0.043	*Type F*	A
			Group B		ML	0.052	*Type F*	J
					SM	0.027	*Type F*	B&I
					SM-ML	0.038	*Type F*	B&I/A
					ML	0.052	*Type F*	I
					ML	0.036	*Type F*	A
Queanbeyan (qn)	steep slopes; infertile shallow stony soils; soils susceptible to sheet and gully erosion; localised seasonal waterlogging	10 to 25	Group B	none	SM	0.028	*Type F*	J
					SM	0.023	*Type D*	J
					ML	0.031	*Type D*	B
			Group C		SM	0.026	*Type F*	J
					SM	0.049	*Type F*	J
					CL	0.040	*Type D*	A
Round Hill (rh)	shallow, infertile, stony soils with low water holding capacity; rock outcrop common; steep rocky slopes susceptible to mass movement and rockfall	>20	Group D	none	SM	0.023	*Type F*	J
					SM	0.011	*Type C*	J
			Group B/C		SM	0.040	*Type F*	J
			Group B		SM	0.017	*Type F*	J
					SM	0.023	*Type F*	I
					CL	0.038	*Type F*	A
Taylors Creek (tc)	rock outcrop and granite tors, shallow hardsetting , infertile soils; low water holding capacity; high run-on and seasonal waterlogging	5 to 10	Group B/C	none	ML	0.049	*Type F*	J
					ML	0.051	*Type D*	J
					ML	0.069	*Type F*	I
					CH	0.076	*Type F*	H
			Group B/C		ML	0.079	*Type F*	I
					CH	0.033	*Type D*	E
Tharwa (th)	rock outcrop and tors; hard-setting, infertile soils with low water-holding capacity; poorly drained subsoil with localised ddispersibility; high run-on and seasonal waterlogging	3 to 20	Group D	none	ML	0.044	*Type F*	J
					SM	0.031	*Type C*	J
					SM	0.034	*Type D*	J
					ML	0.066	*Type D*	E
					SC-CL	0.028	*Type D*	G
					SC-CL	0.036	*Type F*	B

Table 24 Canberra Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
			Group C		ML	0.041	*Type D*	J
					ML	0.056	*Type D*	B
Williamsdale (wi)	highly erodible soils; localised hard-setting surfaces and dispersible subsoils; high run-on contributing to seasonal waterlogging and localised flooding; overclearing and die-back in evidence	<10	Group D	none	SM	0.025	*Type F*	J
					OL	0.038	*Type F*	J
					SM	0.040	*Type D*	J
					CL	0.028	*Type F*	B
					ML	0.060	*Type D*	D
					CL	0.062	*Type D*	D
			Group D		OL	0.034	*Type F*	J
					CL	0.055	*Type F*	A
Winnunga (wn)	highly erodible infertile soils with dispersible subsoils; high run-on contributing to gully erosion, localised high water tables, seasonal waterlogging, salinity and seepage scalding	3 to 10	Group B	none	SM-ML	0.040	*Type F*	J
					OL	0.021	*Type F*	J
					ML	0.052	*Type F*	D
					ML	0.060	*Type D*	D
					CH	0.015	*Type F*	G
					CL	0.047	*Type D*	D
					CH	0.020	*Type F*	G

Table 25 Braidwood Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Allianoyonyiga (al)	generally steep slopes; localised shallow soils and rock outcrop upslope; high run-on, waterlogging in low areas; localised high erosion hazard	20 to 40	Group C	none	OL	Peaty	*Type F*	J
					ML	0.054	*Type D*	B
					ML	0.054	*Type D*	B
			Group D		MH	0.059	*Type D*	B
					CL	0.033	*Type D*	B
Brushy Hill (bh)	generally rocky; localised non cohesive soils, widespread wind erosion hazard	10 to 32	Group B	none	SM	0.028	*Type F*	J
					SM	0.023	*Type D*	J
					CH	0.022	*Type F*	C
					CL	0.017	*Type D*	A
Lower Boro (br)	localised high run-on and waterlogging; widespread incidence of seasonal waterlogging; localised shallow soils, rock outcrop and high erosion hazards; localised non cohesive soils and wind erosion	<20	Group C	none	SM-SC	0.027	*Type F*	J
					SM	0.037	*Type F*	J
					SC	0.029	*Type D*	B
Butmaroo (bt)	steep slopes, shallow soils with localised rock outcrop; high erosion hazard; localised mass movement	>20	Group C	none	CL	0.032	*Type F*	A
					CL	0.020	*Type F*	C
					SM	Peaty	*Type F*	J
					SM	0.028	*Type F*	J
					SC-CL	0.037	*Type D*	D
Braidwood (bw)	localised shallow soils and rock outcrop upslope; high run-on, permanently high watertables, waterlogging in low areas; localised high water erosion hazard; non cohesive soils and localised wind erosion hazards	0 to 15	Group C	none	SM	0.025	*Type F*	J
					SM	0.028	*Type F*	J
					CH	0.015	*Type F*	G
					SC	0.028	*Type D*	D
					SM-SC	0.027	*Type F*	J/B
					CL	0.018	*Type D*	B
Celeys Creek (cc)	widespread seasonal waterlogging; localised non cohesive materials; shallow profiles	10 to 32	Group C	none	SM	0.043	*Type F*	I
					SM	0.052	*Type F*	J
					CL	0.033	*Type F*	A
Cooper (cp)	widespread wind erosion hazard on non cohesive soils; high run-on, waterlogging in low areas	<3	Group B	none	SP	0.049	*Type F*	J
					SP	0.063	*Type F*	J
					CL	0.020	*Type F*	G
Currowan (cu)	localised shallow soils; waterlogging in some low areas; localised risks to foundations	<20	Group C	none	PT	Peaty	*Type F*	J
					ML-CL	0.034	*Type D*	D
					ML-CL	>0.084	*Type F*	D
			Group B		SC	0.020	*Type F*	J

Table 25 Braidwood Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					SC	0.025	*Type F*	B
Durran Durra (dd)	shallow soils and rock outcrop upslope; high run-on and seasonal waterlogging in low areas; localised threats to foundations	10 to 30	Group C	none	PT	Peaty	*Type F*	J
					ML-CL	0.052	*Type D*	D
					ML	0.061	*Type D*	D
					CH	0.021	*Type D*	D
Duckfield Hut (dh)	widespread seasonal waterlogging; localised shallow soils, rock outcrop and seepage scalds; localised risks to foundations	5 to 15	Group B/C	none	OL	0.042	*Type F*	J
					SM	0.056	*Type D*	J
					CL	0.027	*Type D*	G
					CL	0.027	*Type D*	E
Eastfields Creek (ea)	generally high run-on to low areas; permanently high watertables, seasonal waterlogging and flooding widespread; localised non cohesive soils; localised high erosion hazard; general risks to foundations	<10	Group B/C	none	ML	0.053	*Type F*	A
					ML	0.045	*Type D*	B
			Group C/D		ML	0.061	*Type D*	J
					ML-CL	0.047	*Type D*	D
					CL	0.033	*Type D*	D
Fairy (fa)	steep slopes and shallow soils; localised water erosion hazards; mass movement on step areas; high run-on in some low areas; extreme risks to foundations	>20	Group D	none	SM-ML	Peaty	*Type F*	J
					ML	0.034	*Type D*	D
					CL	0.028	*Type D*	B
			Group C		SM	0.041	*Type F*	J
					ML	0.052	*Type D*	B
					CL	0.038	*Type D*	D
Hammonds Hill (hh)	generally steep slopes and localised rock outcrop; localised high erosion hazard; high run-on and seasonal waterlogging in some low areas; widespread threat to foundations	>20	Group D	none	ML	0.052	*Type F*	J
					CL	0.042	*Type F*	B
					ML-CL	0.060	*Type F*	B
Hollow Wood (hw)	localised rock outcrop and seasonal waterlogging	5 to 25	Group B/C	none	PT	Peaty	*Type F*	J
					CH	0.071	*Type F*	C
			Group C		ML	0.033	*Type D*	J
					CH	0.020	*Type F*	G
Illogan Park (ip)	widespread shallow soils and localised seepage scalds; seasonal waterlogging in low areas; localised areas of high erosion hazard	< 10		none	SM	0.035	*Type F*	J
					SM-SC	0.039	*Type F*	I
					CL	0.056	*Type F*	C
Kalbili (ka)	high run-on and seasonal waterlogging in low areas; widespread high erosion hazard; general risks to foundations	<20	Group C	none	SM-ML	0.056	*Type F*	J
					SM	0.061	*Type F*	I
					CH	0.025	*Type D*	A

Table 25 Braidwood Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Kamleh (km)	localised pockets of non cohesive soils and rock outcrop; high run-on to some low areas; localised areas of high erosion hazard	<12	Group C	none	SM	0.039	*Type F*	J
					SM	0.050	*Type F*	J
					SC-CL	0.040	*Type F*	B/A
Larbert (la)	generally high run-on, seasonal waterlogging and flooding in lower areas; localised non cohesive soils and generally high wind erosion hazard; general risks to foundations	<5	Group B/C	none	SM	0.055	*Type F*	J
					SM	0.069	*Type D*	J
					CL	0.044	*Type D*	D
					SC	0.038	*Type F*	I
					SC	0.042	*Type F*	I
			Group D		MH	0.062	*Type F*	J
					MH	>0.075	*Type D*	D
					CL	0.043	*Type D*	E
					ML-CL	0.052	*Type D*	E
Lake Bathurst (lb)	high run-on, waterlogging and flooding in lower areas; localised risks to foundations	<3	Group B	none	SM	0.026	*Type F*	J
					SC	0.022	*Type C*	I
					SC	0.011	*Type D*	I
					SC	0.012	*Type D*	I
					SC	0.021	*Type D*	E
Mount Budawang (mb)	generally steep slopes; shallow soils and rock outcrop widespread; instances of high water erosion hazard; high run-on to some low areas; general risks to foundations	20 to 40+	Grou C	none	SM	0.028	*Type F*	J
					CL	0.030	*Type F*	B
			Group C		OL	0.015	*Type C*	J
					SC	0.026	*Type F*	B
					CL	0.030	*Type D*	B
Misery Mountain (mi)	generally steep slopes and widespread rock outcrops; localised shallow soil; instances of mass movement hazard; high run-on in low areas; general risks to foundations	>20	Group C/D	none	SM	0.010	*Type F*	J
					SC-ML	0.024	*Type D*	D
					CL	0.027	*Type D*	D
Moura Creek (mk)	localised shallow soils and rock outcrop; non cohesive materials in parts; instances of high erosion hazard; seasonal waterlogging and flooding in some low areas; localised risks to foundations	5 to 15	Group C	none	ML	0.054	*Type F*	J
					ML	0.073	*Type D*	I
					CL	0.028	*Type D*	A
					ML	0.058	*Type D*	D
					ML-CL	0.050	*Type D*	B
Monga (mn)	localised steep slopes and high run-on to low areas; general risks to foundations	10 to 32	Group C	none	OL	Peaty	*Type F*	J
					ML	0.045	*Type F*	A
					CL	0.038	*Type F*	C
			Group B/C		PT	Peaty	*Type F*	J
					SM	0.049	*Type F*	J

Table 25 Braidwood Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Mongarlowe (mo)	localised shallow soils and rock outcrop upslope; widespread seasonal waterlogging in low areas	5 to 20	Group C	none	ML-CL	0.038	*Type F*	J
					CL	0.087	*Type F*	C
					ML-CL	0.041	*Type F*	A
Morass (ms)	localised shallow soils and rock outcrop upslope; high run-on and widespread seasonal waterlogging in low areas	3 to 10	Group C	none	ML	0.046	*Type F*	J
					CL	0.032	*Type F*	B
					CL	0.028	*Type F*	C
			Group C		ML	0.041	*Type F*	J
					CL	0.039	*Type F*	B
					CH	0.018	*Type F*	G
Oallen (oa)	localised areas of non cohesive soils and wind erosion; some shallow soils upslope; some permanently high watertables in low areas	<10	Group D	none	ML	0.044	*Type D*	J
					OL	0.024	*Type F*	J
			Group A		SM	0.023	*Type F*	J
					SM	0.026	*Type F*	J
					SC	0.030	*Type F*	I
Oorong (oo)	generally non cohesive soils, widespread wind erosion hazard; localised waterlogging in some low areas	na	Group A	none	OL	0.010	*Type F*	J
					SP	0.017	*Type C*	J
					SP	0.019	*Type C*	I
					SC	0.029	*Type F*	B
					CL	0.028	*Type D*	G
Palerang (pa)	generally steep rocky slopes; localised areas of shallow soils; high run-on in some low areas; widespread risks to foundations	>32	Group C	none	SM	Peaty	*Type F*	J
					SM	0.025	*Type F*	J
			Group C		ML	0.045	*Type F*	J
					ML	0.048	*Type D*	B
					CL	0.090	*Type F*	C
Sand Hills (sh)	non cohesive soils and high wind erosion hazards throughout; localised rock outcrops	5 to 10	Group B	none	SM	0.052	*Type F*	J
					SM	0.065	*Type F*	B&I
					SM	0.058	*Type F*	J
					CL	0.045	*Type D*	D
Sight Hill (si)	localised steep slopes, shallow soils and rock outcrops; high run-on and seasonal waterlogging in some low areas	20 to 40	Group B	none	OL	0.027	*Type F*	J
					GM-SM	0.057	*Type F*	J
					CL	0.042	*Type D*	B
					ML	0.045	*Type D*	B
Taylors Creek (tc)	localised shallow soils and rock outcrop; instances of high erosion hazard; localised high run-on and widespread waterlogging in lower areas; localised non cohesive soils	5 to 10	Group C	none	SM-ML	0.049	*Type F*	J
					SM-ML	0.055	*Type D*	I
					CL	0.035	*Type F*	A

Table 25 Braidwood Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					SM	0.058	*Type F*	J
					CL	0.031	*Type D*	B
Tomboye (to)	widespread waterlogging and mass movement; localised shallow soils; risks to foundations throughout the area	<32	Group D	none	OL	0.034	*Type F*	J
					MH	0.058	*Type F*	I
			Group C		OL	Peaty	*Type F*	J
					ML	0.053	*Type F*	A
			Group C		OL	0.019	*Type D*	J
					CH	0.025	*Type D*	F
Turallo (tu)	localised steep slopes and shallow soils; high run-on and waterlogging in some low areas;	<20	Group C/D	none	OL	0.032	*Type F*	J
					SM	0.038	*Type F*	I
					SM	0.038	*Type F*	J
					SC	0.036	*Type F*	B
			Group C		SC	0.027	*Type F*	J
					ML	0.042	*Type F*	A
					CL	0.077	*Type F*	C
Tarrawarra (tw)	localised steep slopes, shallow soils, rock outcrops and seepage scalds; high run-on and seasonal waterlogging in some low areas; instances of non cohesive soils and wind erosion hazards; localised risks to foundations	<10	Group B	none	SM	0.027	*Type F*	J
					SM-SC	0.034	*Type F*	J/B
					SM-SC	0.039	*Type C*	I
			Group D		CL	0.036	*Type F*	J
					ML-CL	0.043	*Type D*	D
					CL	0.029	*Type D*	A
Windellama (wi)	localised areas of mass movement	20 to 32	Group C	none	SM	0.049	*Type F*	J
					SM	0.064	*Type F*	J
					CL	0.026	*Type F*	A
					CH	0.039	*Type D*	F

Table 26 Michelago Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Anembo (an)	widespread seasonal waterlogging; localised permanent waterlogging of low areas	<10		none	SW	0.030	*Type F*	I
			Group B		SW	0.034	*Type D*	J
					SW	0.040	*Type F*	J
			Group C		CL	0.041	*Type F*	A
					CL	0.042	*Type F*	A
					CL	0.035	*Type F*	A
			Group B		SM	0.045	*Type F*	J
					SC	0.035	*Type D*	B
Burra (ba)	high water and wind erosion hazards; high run-on to low areas, mass movement of steeper slopes; localised shallow soils	5 to 30	Group B/C	none	ML	0.028	*Type F*	J
					GC-SC	0.051	*Type F*	I
					SC	0.034	*Type F*	B
					CL	0.029	*Type F*	C
Big Badja (bb)	shallow soils and high erosion hazard; localised steep slopes subject to mass movement; localised waterlogging	5 to 35	Group B	none	SC	0.037	*Type F*	J
					SC	0.023	*Type F*	C
					SC	0.029	*Type F*	B
					SM	0.038	*Type F*	J
					SM	0.045	*Type D*	J
			Group B		SM	0.028	*Type F*	J
			Group C		PT	Peaty	*Type F*	J
					CL	0.031	*Type D*	A
					CL	0.044	*Type D*	B
Bredbo (bd)	subject to wind and water erosion hazards; uplands with localised shallow soils, rock outcrop, non cohesive soils; high run-on and localised waterlogging in some low areas	5 to 25	Group D	none	CL-ML	0.048	*Type F*	J
					SC-SM	0.033	*Type F*	I
			Group C		SC	0.031	*Type F*	I
					CL	0.041	*Type F*	A
			Group C		ML	0.050	*Type F*	A
			Group B		SC	0.035	*Type F*	I
			Group B		ML-CL	0.041	*Type F*	I
			Group B/C		ML	Peaty	*Type F*	A
					SC	0.029	*Type F*	B
					ML	0.041	*Type F*	A
					SP	0.029	*Type C*	J
Bennison (be)	shallow soils, rock outcrop upslope; high run-on in low areas; mass movement and localised rock falls	10 to 40	Group C/D	none	SC-CL	0.029	*Type F*	J
					SC-CL	0.056	*Type F*	B
					SC	0.046	*Type D*	B
					CL	0.054	*Type D*	B
Bendemeer (bn)	high run-on to low areas; widespread seasonal waterlogging and flooding; localised wind erosion	<10	Group C	none	ML	0.045	*Type F*	I
					CL	0.040	*Type F*	C

Table 26 Michelago Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
			Group C		OL	0.024	*Type F*	J
					CL	0.037	*Type D*	B
					CL	0.035	*Type D*	B
					SC	0.043	*Type F*	B
Bollara (bo)	shallow soils, rock outcrop upslope; high run-on in low areas; mass movement and localised rock falls	10 to 30	Group C	none	ML	0.037	*Type F*	J
					MH	0.063	*Type D*	D
					CL	0.051	*Type D*	D
			Group D		ML	0.066	*Type D*	D
			Group C		ML	0.037	*Type F*	A
					ML	0.043	*Type D*	B
					ML	0.054	*Type D*	B
Campbell (ca)	steep slopes, shallow soils and rock outcrop; high run-on to low areas with localised high watertable conditions; wide_spread steep slopes, localised mass movement	>20	Group B/C	none	OL	0.034	*Type F*	J
					ML	0.060	*Type D*	I
					CL	0.039	*Type D*	A
					CL	0.033	*Type D*	A
Celeys Creek (cc)	widespread rockiness; some steep slopes and shallow soils underlying localised erosion hazards; low areas subject to localised high watertable and waterlogging conditions	10 to 32	Group B/D	none	SM	0.028	*Type F*	I
					SM	0.052	*Type D*	J
					SC	0.030	*Type F*	B
					SM	0.045	*Type D*	J
					SC	0.035	*Type F*	B
Captains Flat (cf)	shallow soils upslope; widespread waterlogging and localised flood hazards on low areas	<15	Group C/D	none	ML	0.040	*Type F*	J
			Group C		GM	0.026	*Type F*	J
					MH	0.055	*Type D*	D
					CL	0.035	*Type D*	B
			Group B/C		SC	0.040	*Type F*	I
					ML	0.052	*Type F*	B
					GC	0.034	*Type F*	B
Cosgrove (co)	widespread mass movement on steep slopes; localised shallow soils	5 ot 30	Group C	none	ML	0.049	*Type F*	A
					CL	0.037	*Type F*	B
			Group B		ML	0.038	*Type F*	J
					CL	0.024	*Type F*	A
					CL	0.013	*Type F*	A
					CL	0.023	*Type F*	C
Clear Range (cr)	steep slopes mass movement, shallow soils and rock outcrop underlying widespread high water erosion hazard; localised non cohesive soils; high run-on to low areas	>20	Group B/D	none	SC	0.028	*Type F*	J
					SC	0.035	*Type F*	I
					SC	0.039	*Type F*	I
					SC	0.026	*Type F*	B

Table 26 Michelago Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					SM	0.051	*Type F*	J
Foxlow (fo)	steep slopes mass movement, shallow soils and rock outcrop underlying widespread high water erosion hazard; high run-on to low areas;	>20	Group C/D	none	GM	Peaty	*Type C*	J
					SM	0.054	*Type F*	J
					SM	0.051	*Type D*	J
					CH	0.027	*Type F*	A
					SC	0.031	*Type F*	I
			Group B/C		MH	0.055	*Type D*	B
					CL	0.054	*Type D*	B
Gungoandra (gn)	shallow soils and steep slopes contribute to high erosion hazard and high run-on to low areas	<50	Group C	none	SM	0.039	*Type F*	I
					CL	0.037	*Type F*	A
					CL	0.028	*Type D*	A
Murrumbidgee Gorge (go)	steep slopes mass movement, shallow soils and rock outcrop underlying widespread high water erosion hazard; high run-on to low areas;	>32	Group D	none	SM	0.037	*Type F*	J
Gudgenby (gu)	widespread waterlogging and flooding hazards; localised non cohesive soils	3 ot 10	Group B	none	GM	0.039	*Type F*	J
					SM	0.040	*Type F*	J
					CL	0.020	*Type D*	A
					GM	0.060	*Type F*	J
			Group C		ML	0.022	*Type F*	J
					CL	0.039	*Type F*	C
Lyons Creek (lc)	widespread wind and water erosion hazards; non cohesive soils; high run-on to all low areas	5 to 30	Group B/C	none	MH	0.049	*Type F*	J
					MH	0.072	*Type F*	E
					CL	0.030	*Type F*	C
					CL	0.038	*Type F*	B
					CL	0.046	*Type F*	A
					GC	0.034	*Type F*	B
			Group C/D		ML	0.039	*Type F*	J
					ML	0.064	*Type D*	D
Livingstone (li)	localised steep slopes, shallow soils, rockiness upslope; localised seasonal waterlogging in low areas	10 to 35	Group B	none	ML	Peaty	*Type F*	I
					SC	0.030	*Type F*	I
					SC	0.036	*Type F*	I
			Group C/D		MH	0.049	*Type D*	J
					CL	0.033	*Type F*	A
Murrumbucca Creek (mc)	high wind and water erosion hazards; localised rock outcrop	5 to 10	Group B/D	none	SC	0.046	*Type F*	J
					SC	0.045	*Type F*	I
					CL	0.044	*Type F*	C

Table 26 Michelago Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					SC	0.038	*Type F*	B
					CL	0.032	*Type D*	A
Mount Dowling (md)	steep slopes, shallow soils and rock outcrop; non cohesive soils;	>20	Group C/D	none	ML	0.040	*Type F*	J
					SP	0.055	*Type F*	J
					SM	0.058	*Type F*	J
Macanally Mountain (mm)	steep slopes mass movement, shallow soils and rock outcrop underlying widespread high water erosion hazard; high run-on to low areas	10 to 30	Group C/D	none	ML	Peaty	*Type F*	J
					CL	0.048	*Type F*	A
					CL	0.045	*Type D*	B
			GroupB/C		MH	0.058	*Type F*	B
					CL	0.051	*Type F*	B
Mount Colinton (mn)	steep slopes, shallow soils and rock outcrop; widespread mass movement; non cohesive soils; localised seasonal waterlogging in low areas	>20	Group C/D	none	GP	Peaty	*Type C*	J
					GP	Peaty	*Type C*	I
					SP	0.051	*Type C*	J
					SW	0.049	*Type F*	J
			Group B		GW	0.032	*Type C*	J
					SP	0.037	*Type F*	J
					CL	0.028	*Type D*	A
					SP	0.037	*Type F*	I
					SW	0.033	*Type C*	I
					SW	0.039	*Type D*	J
Nundora (nu)	shallow soils and rock outcrop; high erosion hazard; high run-on to any low areas	3 to 30	Group D	none	SM	0.031	*Type F*	J
			Group C		SM	0.055	*Type F*	J
					SC	0.024	*Type F*	B
Onslow (on)	widespread water erosion hazard; seasonal waterlogging; localised shallow, non cohesive soils and rock outcrop	10 to 32	Group D	none	SM	0.042	*Type F*	J
			Group B		SM	0.040	*Type F*	J
					CL	0.027	*Type F*	A
Round Hill (rh)	steep slopes mass movement, shallow soils and scattered rock outcrop underlying widespread high water erosion hazard	>20	Group D	none	SP	0.020	*Type C*	J
					SP	0.033	*Type C*	J
			Group B		SM	0.038	*Type F*	J
					SM	0.046	*Type F*	J
					SC	0.028	*Type D*	B
Roberts Mountain (rm)	steep slopes and shallow soils; high erosion hazard; high run-on to some low areas	10 to 30	Group B	none	ML	0.024	*Type F*	C
					SC-CL	0.063	*Type F*	C
			Group D		GM	0.027	*Type F*	J
					GM	0.070	*Type D*	J
					ML	0.020	*Type F*	C

Table 26 Michelago Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					MH	0.057	*Type F*	I
Schofields Creek (sc)	shallow soils and scattered rock outcrop; high water erosion hazard	10 to 15	Group D	none	PT	Peaty	*Type F*	J
					SC	0.040	*Type D*	B
					CL	0.037	*Type F*	A
			Group B		SC	0.031	*Type F*	I
					SC	0.034	*Type D*	D
			Group B		SP	0.023	*Type F*	J
					CL	0.085	*Type F*	C
					MH-CL	0.037	*Type D*	J
					MH	0.055	*Type D*	I
					SP	0.020	*Type F*	J
Strike-a-light (sl)	generally non cohesive soils; widespread seasonal waterlogging	<15	Group B	none	SC-ML	0.029	*Type F*	J
					SM	0.038	*Type F*	J
					CL	0.020	*Type D*	B
					SM	0.046	*Type F*	J
					CL	0.038	*Type D*	A
					CH	0.063	*Type F*	C
Smiths Road (sr)	high water erosion hazards; localised shallow soil, non cohesive materials and rock outcrop	20 to 50	Group B/D	none	SM	0.048	*Type F*	J
					SC	0.043	*Type D*	D
					SC	0.034	*Type D*	B
Spring Vale (sv)	localised shallow soils and rock outcrops; localised erosion hazards; some local high watertable and waterlogging conditions	10 to 32	Group C/D	none	ML	Peaty	*Type F*	A
					CL	0.034	*Type F*	A
					ML	0.015	*Type F*	C
Tallaganda (ta)	widespread steep slopes, non cohesive soils, rock outcrop; some localised mass movement and rock falls	>20	Group C	none	SC	Peaty	*Type F*	C
					CL	0.060	*Type F*	C
					CL	0.024	*Type F*	A
Tharwa (th)	generally high run-on to low areas, localised seasonal waterlogging; localised shallow soils; localised non cohesive materials	3 to 20	Group C	none	SM	0.034	*Type F*	J
					SC	0.038	*Type F*	I
					CL	0.010	*Type D*	A
					CL	0.029	*Type F*	A
					CL	0.043	*Type D*	B
Tinderry (ti)	steep slopes and mass movement; shallow soil and rock outcrop underlying high erosion hazard in some areas; localise high run-on, high watertables and seasonal waterlogging in some low areas; general threat to foundations	20 to 25	Group D	none	SM	Peaty	*Type F*	J
					PT	Peaty	*Type F*	J
					SM	Peaty	*Type F*	J
			Group C		MH	0.037	*Type F*	J
					SM	0.035	*Type F*	J

Table 26 Michelago Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					SC	0.041	*Type F*	B
Williamsdale (wi)	general wind erosion hazard; high run-on and seasonal waterlogging affects low areas	<10	Group B/C	none	SM	0.030	*Type F*	J
					ML	0.051	*Type D*	I
					CL-ML	0.049	*Type D*	B
					SM	0.051	*Type D*	J
					SC	0.036	*Type D*	D

Table 27 Cooma Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Amaroo (am)	high erosion hazard; localised shallow soils	12 to 32	Group B	none	MH	0.059	*Type F*	I
					MH	0.058	*Type F*	I
					CL	0.070	*Type F*	I
					CL	0.073	*Type F*	I
					CL	0.067	*Type F*	I
					SC-CL	0.064	*Type F*	I
					MH	0.060	*Type F*	I
					SC-ML	0.044	*Type F*	I
					SC-ML	0.064	*Type F*	I
					CL	0.055	*Type D*	D
Anembo (an)	localised high watertable and waterlogged conditions; seasonal waterlogging throughout area; localised threats to foundations	6 to 10	Group B	none	SM	0.031	*Type F*	I
					SM	0.036	*Type F*	I
					SC	0.035	*Type F*	I
					SC	0.032	*Type D*	I
					SM-SC	0.051	*Type F*	I
					SC	0.039	*Type F*	B
					CL	0.069	*Type F*	I
					ML	0.055	*Type F*	I
					SC-CL	0.040	*Type F*	B/A
			Group C		PT	Peaty	*Type F*	J
					CL	0.029	*Type F*	G
					CL	0.033	*Type F*	C
Big Badja (bb)	shallow soils and high erosion hazard; localised steep slopes subject to mass movement; localised waterlogging; localised threats to foundations	3 to 32	Group B-D	none	SM	0.018	*Type F*	I
			Group B		SC	0.031	*Type F*	I
					SC	0.021	*Type F*	I
					SM-SC	0.048	*Type F*	I
					SC	0.030	*Type F*	C
			Group C/D		SM	0.028	*Type F*	B&I
Barkersdale Creek (bc)	steep slopes, shallow soils and rock outcrop; high erosion hazard; high run-on to low areas; general threat to foundations	15 t0 40	Group D	none	SM	0.049	*Type F*	J
			Group B		SM	0.045	*Type F*	I
					SC-ML	0.052	*Type F*	B/A
					MH	0.062	*Type F*	I
					MH	0.061	*Type D*	I
					CL	0.038	*Type F*	A
					ML	0.057	*Type F*	C
					SC	0.051	*Type F*	B
			Group B		SM	0.054	*Type F*	I

Table 27 Cooma Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Bredbo (bd)	subject to wind and water erosion hazards; uplands with localised shallow soils, rock outcrop, non cohesive soils; high run-on and localised waterlogging in some low areas; localised threats to foundations	3 to 10	Group D	none	SM	0.037	*Type C*	I
					SC	0.033	*Type F*	I
			Group B		SC-ML	0.032	*Type F*	B/A
					CL	0.090	*Type F*	I
					SC	0.053	*Type D*	B
					SC	0.033	*Type F*	I
					SC	0.031	*Type F*	B
					SC	0.014	*Type F*	I
					ML	0.041	*Type F*	A
					SM	0.045	*Type D*	J
					SC	0.032	*Type F*	B
					CL	0.047	*Type F*	B
			Group A		SC	0.015	*Type F*	I
					SP	0.003	*Type C*	J
Bullanamang Gap (bg)	widespread steep slopes, shallow soils, rock outcrop underlying high erosion hazard; localised mass movement; high run-on to some low areas; general threat to foundations	15 to 56	Group D	none	SC	0.040	*Type F*	I
			Group B		ML	0.029	*Type F*	A
					CL	0.037	*Type D*	B
					SC	0.028	*Type F*	I
					SC-ML	0.034	*Type F*	I
Binjura (bj)	general erosion hazard; localised shallow soils, rock outcrop and non cohesive soils; localised threats to foundations	10 to 15	Group D	none	SC	0.037	*Type F*	I
					SC	0.039	*Type F*	I
			Group B		CL	0.038	*Type F*	B
					ML-CL	0.028	*Type F*	G
					SC	0.035	*Type F*	B
Bobundara (bn)	generally shallow soils and high erosion hazard; localised steep slopes; high run-on to low areas; localised threats to foundations	7 to 32	Group C/D	none	SC	0.034	*Type F*	I
			Group B		GM	0.041	*Type C*	J
					CL	0.012	*Type F*	C
					CL	0.044	*Type F*	B
					CL	0.041	*Type F*	B
					CL	0.025	*Type F*	C
					CL	0.051	*Type F*	B
					CL	0.044	*Type F*	C
					CL	0.033	*Type D*	D
Brothers (br)	steep slopes, shallow soils and localised rock outcrop underlying generally high erosion hazard; localised mass movement; high run-on to low areas; general threat to foundations	15 to 32	Group B	none	CL	0.023	*Type F*	B
					CL	0.020	*Type F*	G
					CL	0.017	*Type F*	C
			Group B/D		ML	0.038	*Type F*	A

Table 27 Cooma Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Black Snake Creek (bs)	widespread steep slopes, shallow soils and rock outcrop contributing to high erosion hazard; high run-on to some low areas; localised mass movement; general threat to foundations	10 to 40	Group D	none	SW	0.038	*Type F*	I
			Group B		SC	0.033	*Type F*	I
					SP	0.034	*Type F*	J
					CL	0.020	*Type F*	A
					SC-CL	0.036	*Type D*	B
					SM-SC	0.043	*Type F*	B&I/B
Big Willow (bw)	general wind and water erosion hazards; some localised shallow soils and rock outcrop; localised risk to foundations	20	Group B/D	none	SM	0.031	*Type F*	I
					SC	0.042	*Type F*	I
			Group B		SC-ML	0.034	*Type F*	I
					CL	0.029	*Type F*	A
					SC	0.040	*Type F*	I
Celeys Creek (cc)	widespread rockiness; some steep slopes and shallow soils underlying localised erosion hazards; low areas subject to localised high watertable and waterlogging conditions; localised threats to foundations	8 to 33	Group B	none	SM	0.024	*Type F*	I
					SC	0.041	*Type F*	I
					SC	0.029	*Type F*	I
					SC	0.030	*Type F*	C
					SC	0.035	*Type F*	B
Cranky Dans Creek (cd)	widespread shallow soils and localised rock outcrop underlies generally high erosion hazard; localised threats to foundations	12 to 25	Group B	none	SM	0.024	*Type F*	I
					ML-CL	0.033	*Type F*	I
					MH	0.058	*Type F*	I
					SC-CL	0.028	*Type F*	B/A
					SM	0.043	*Type F*	B&I
			Group B/C		ML	0.045	*Type F*	A
					CL	0.043	*Type D*	B
			Group B		SC-CL	0.027	*Type F*	B/A
Cloyne Limestone Hills (cl)	mixture of shallow, non cohesive soils and rock outcrop underlies generally high wind and water erosion hazards	5 to 15	Group D	none	ML-CL	0.038	*Type F*	B
			Group C		ML	0.051	*Type F*	A
					CL	0.048	*Type F*	B
					MH	0.063	*Type D*	A
					CL	0.026	*Type F*	K
					ML-CL	0.027	*Type F*	G
Clear Range (cr)	steep slopes mass movement, shallow soils and rock outcrop underlying widespread high water erosion hazard; localised non cohesive soils; high run-on to low areas; general threat to foundations	>20	Group D	none	SC	0.028	*Type F*	I
			Group B		SC	0.035	*Type F*	I
					SC	0.039	*Type F*	I
			Group C		SC	0.026	*Type F*	B

Table 27 Cooma Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					SM	0.051	*Type F*	J
Dairymans Plain (da)	localised high run-on to low areas; seasonal waterlogging and flooding widespread; high erosion hazard	<7	Group C/D	none	SC	0.036	*Type F*	I
					CL	0.036	*Type F*	A
			Group B		SC	0.038	*Type F*	I
					SC	0.042	*Type F*	I
					ML	0.038	*Type F*	A
			Group C		ML	0.033	*Type F*	A
Dry Farm (df)	shallow soils underlying high erosion hazard; localised threats to foundations	2 to 20	Group C/D	none	ML	0.043	*Type F*	I
					SC	0.034	*Type F*	I
			Group B		SP	0.017	*Type C*	J
					CL	0.061	*Type F*	I
					SC	0.035	*Type F*	D
					SC	0.021	*Type F*	I
					SC	0.031	*Type F*	I
					SC	0.035	*Type F*	B
					CL	0.022	*Type F*	C
					SC	0.035	*Type F*	C
Dromore (dr)	generally high wind and water erosion hazards	<10	Group C	none	SC	0.033	*Type F*	I
					SC	0.046	*Type F*	I
					SC	0.044	*Type C*	I
			Group B		SC	0.035	*Type F*	I
					SC	0.029	*Type F*	C
					SC	0.033	*Type F*	I
			Group C		SC	0.043	*Type F*	I
					ML	0.021	*Type F*	K
					CL	0.038	*Type F*	B
Duck Hole Creek (du)	high erosion hazard; localised threats to foundations	6 to 20	Group B	none	CL	0.040	*Type D*	D
					CL	0.046	*Type F*	C
					CL	0.026	*Type F*	A
			Group B/C		ML-OL	Peaty	*Type F*	J
					SC	0.049	*Type D*	D
					ML	0.026	*Type F*	B
					CL	0.045	*Type F*	C
Foxlow (fo)	steep slopes mass movement, shallow soils and rock outcrop underlying widespread high water erosion hazard; high run-on to low areas; general threat to foundations	40	Group B	none	SC	0.034	*Type D*	D
			Group D		SM	0.019	*Type C*	J
					SM	0.054	*Type F*	J

Table 27 Cooma Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					SM	0.051	*Type D*	J
					CH	0.027	*Type F*	G
			Group B		SC	0.031	*Type F*	I
					MH	0.055	*Type D*	B
					CL	0.054	*Type D*	B
Murrumbidgee Gorge (go)	steep slopes mass movement, shallow soils and rock outcrop underlying widespread high water erosion hazard; high run-on to low areas; general threat to foundations	>56	Group D	none	SM	0.051	*Type F*	I
Kydra Peaks (ky)	steep slopes, shallow soils and rock outcrop underlying widespread high water erosion hazard; localised non cohesive soils; general threat to foundations	>25	Group D	none	SM	0.011	*Type F*	J
					MH	0.048	*Type D*	D
					MH	0.062	*Type F*	I
Maneroo (ma)	non cohesive soils underlying high wind erosion hazard; localised shallow soil and rock outcrop contributing to localised erosion hazards; general threat to foundations	1 to 10	Group D	none	ML	0.022	*Type F*	I
					CL	0.014	*Type F*	H
					CL	0.026	*Type F*	A
					ML-OL	0.034	*Type F*	J
			Group C		CL	0.011	*Type D*	G
					SC	0.010	*Type F*	K
					CL	0.042	*Type F*	B
					CL	0.033	*Type F*	G
Murrumbidgee (mb)	widespread wind and water erosion hazards; flood hazard; seasonal waterlogging in some low areas; localised non cohesive soils; general threat to foundations	<3	Group B	none	GC	0.022	*Type C*	I
					SC	0.027	*Type F*	B
			Group C		MH	0.047	*Type D*	A
			Group A		SC	0.040	*Type F*	I
			Group B		ML	0.053	*Type F*	C
			Group A		CL-MH	0.041	*Type F*	B/A
					SM	0.038	*Type F*	I
					SC	0.041	*Type F*	B
			Group B		ML	0.042	*Type F*	C
					SC-SM	0.032	*Type F*	I
Murrumbucca Creek (mc)	high wind and water erosion hazards; localised rock outcrop; localised threats to foundations	5 to 10	Group D	none	SC	0.046	*Type F*	I
			Group B		SC	0.045	*Type F*	I
					CL	0.044	*Type F*	C
					SC	0.038	*Type F*	B
					CL	0.032	*Type D*	A

Table 27 Cooma Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Middle Flat (mf)	generally high wind and water erosion hazards; localised high run-on to low areas	<5	Group C	none	ML-CL	0.026	*Type F*	B
					SC	0.039	*Type F*	B
					CL-CH	0.040	*Type F*	C
					ML	0.035	*Type F*	A
Mount Gladstone (mg)	shallow soils and rock outcrop underlying high erosion hazard; localised high run-on to low areas; general threat to foundations	10 to 32	Group B/C	none	SW	0.023	*Type F*	J
			Group B		SM-SC	0.032	*Type F*	I
					SC	0.053	*Type F*	I
					SC	0.036	*Type F*	I
					SC	0.038	*Type F*	B
			Group B/C		SC	0.040	*Type F*	I
Mittagang Road (mi)	generally high wind and water erosion hazards; localised high run-on to low areas	<3	Group B	none	SC	0.045	*Type F*	I
					SC	0.036	*Type F*	B
					SC-ML	0.039	*Type F*	B/A
			Group B		SC	0.042	*Type F*	I
					SC	0.033	*Type F*	I
Macanally Mountain (mm)	steep slopes mass movement, shallow soils and rock outcrop underlying widespread high water erosion hazard; high run-on to low areas; general threat to foundations	10 to 32	Group D	none	SM	0.037	*Type F*	J
					CL	0.049	*Type D*	D
			Group C		SC-ML	0.047	*Type F*	B/A
					SM	0.064	*Type F*	J
					MH	>0.079	*Type D*	D
					CL	0.046	*Type F*	B
Muddah (mu)	high wind and water erosion hazards; localised shallow soil, non cohesive materials and rock outcrop; localised threats to foundations	3 to 10	Group D	none	ML	0.031	*Type F*	I
					ML	0.048	*Type F*	I
			Group C		ML	0.042	*Type F*	I
					SM-SC	0.055	*Type F*	I
					CL	0.039	*Type F*	B
					ML-MH	0.059	*Type F*	I
					CL	0.040	*Type F*	A
					SC	0.048	*Type F*	I
Myalla Road (my)	widespread shallow soils and rock outcrop underlying high erosion hazards; localised threats to foundations	5 to 33	Group D	none	SC	0.033	*Type F*	I
			Group C		SC	0.033	*Type F*	I
			Group D		MH	0.051	*Type D*	B
			Group B		SC	0.045	*Type F*	I
					CL	0.040	*Type F*	A

Table 27 Cooma Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Numeralla (nl)	high erosion hazard related to localised shallow soils; high run-on to low areas; localised risks to foundations	5 to 10	Group B	none	ML-CL	0.044	*Type F*	I
					MH	0.058	*Type F*	B
					CL	0.044	*Type F*	B
					ML-MH	0.049	*Type F*	I
					SC	0.050	*Type F*	I
Oakvale (oa)	high wind and water erosion hazards; localised high run-on to low areas	<8	Group B	none	SC	0.030	*Type F*	I
					SC	0.034	*Type F*	I
					SC	0.034	*Type F*	B
					ML-OL	Peaty	*Type F*	J
					ML-CL	0.041	*Type F*	B
					SC	0.038	*Type F*	B
					CL	0.032	*Type D*	A
Pine Hut Flat (ph)	shallow soils underlying high erosion hazard; high run-on to some low areas; localised threats to foundations	<20	Group B	none	ML-CL	0.050	*Type F*	I
					SP	0.042	*Type F*	I
					CL	0.063	*Type F*	K
Rock Flat Creek (rf)	shallow soils, rock outcrops with localised steep slopes underlying high erosion hazard; general threats to foundations	10 to 32	Group D	none	SC	0.019	*Type C*	I
					SC	0.034	*Type F*	I
					SC	0.033	*Type F*	I
					CL	0.027	*Type F*	A
					SC	0.035	*Type F*	B
			Group B		SC-CL	0.031	*Type D*	B
			Group A		SW	0.018	*Type F*	J
					SC	0.026	*Type F*	I
					SC	0.028	*Type F*	I
Round Hill (rh)	steep slopes mass movement, shallow soils and scattered rock outcrop underlying widespread high water erosion hazard; general threat to foundations	>20	Group B/D	none	SP	0.020	*Type C*	J
					SC	0.022	*Type C*	I
			Group B		SM	0.044	*Type F*	J
					SC	0.023	*Type D*	D
					SC	0.028	*Type D*	B
					ML	0.029	*Type F*	C
Roberts Mountain (rm)	steep slopes and shallow soils underlying high erosion hazard; high run-on to some low areas; localised threats to foundations	10 to 33	Group D	none	ML	0.024	*Type F*	C
			Group B		SC-CL	0.063	*Type F*	I
					GM	0.027	*Type F*	I
					GM	0.070	*Type D*	J
Rose Valley (rv)	high wind and water erosion hazards; localised shallow soils	3 to 20	Group B/C	none	SP	0.050	*Type F*	I

Table 27 Cooma Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	and rock outcrop; high run-on to some low areas; localised threats to foundations				ML	0.054	*Type F*	B
					CL	0.035	*Type D*	D
					SC	0.043	*Type F*	I
					SC	0.024	*Type F*	C
					CL	0.043	*Type D*	D
					SW	0.034	*Type F*	J
					SC	0.024	*Type C*	I
					SC	0.036	*Type F*	B
Sapling Creek (sa)	steep slopes mass movement, shallow soils and rock outcrop underlying widespread high water erosion hazard; high run-on to low areas; general threat to foundations	15 to 40	Group D	none	ML-CL	0.041	*Type F*	I
					MH	0.044	*Type F*	A
			Group B		ML	0.056	*Type F*	I
					CL	0.041	*Type F*	C
					ML	0.047	*Type F*	I
					CL	0.035	*Type F*	A
					CL	0.015	*Type F*	A
Schofields Creek (sc)	shallow soils and scattered rock outcrop underlying high water erosion hazard; general threat to foundations	<20	Group D	none	ML	Peaty	*Type F*	A
					PT	Peaty	*Type F*	J
					MH	0.033	*Type F*	I
			Group B		MH-CL	0.037	*Type D*	D
					SC	0.040	*Type D*	B
					ML	0.046	*Type D*	B
					CL	0.086	*Type F*	I
					CL	0.037	*Type F*	A
					SC	0.031	*Type F*	I
					SC	0.039	*Type F*	I
					SC	0.034	*Type D*	D
			Group B/C		SP	0.020	*Type F*	J
					SP	0.023	*Type F*	J
					CL	0.085	*Type F*	I
					CL	0.043	*Type F*	A
					MH	0.055	*Type D*	E
Slacks Creek (sk)	high erosion hazard related to localised shallow soils; localised risks to foundations	6 to 12	Group D	none	ML-OL	0.051	*Type F*	J
					SC-ML	0.043	*Type F*	I
			Group B		SC	0.059	*Type F*	I
					CL	0.055	*Type F*	B
					CL	0.087	*Type F*	I
					CL	0.045	*Type F*	A
					SM-SC	0.042	*Type F*	J/B

Table 27 Cooma Soil Landscapes

Soil landscape	Common constraints	Slope range (%)	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
					MH	0.062	*Type F*	I
			Group D		ML	0.027	*Type F*	B
					MH	>0.078	*Type D*	D
Smiths Road (sr)	high water erosion hazards; localised shallow soil, non cohesive materials and rock outcrop; localised threats to foundations	20 to 33	Group B	none	SM	0.048	*Type F*	J
					SC	0.043	*Type D*	D
					SC	0.034	*Type D*	B
Spring Vale (sv)	localised shallow soils and rock outcrops; localised erosion hazards; some local high watertable and waterlogging conditions; localised threats to foundations	10 to 32		none	ML	Peaty	*Type F*	A
					CL	0.034	*Type F*	A
Tinderry (ti)	steep slopes and mass movement; shallow soil and rock outcrop underlying high erosion hazard in some areas; localise high run-on, high watertables and seasonal waterlogging in some low areas; general threat to foundations	32 to 70	Group D	none	SP	0.006	*Type F*	J
					PT	Peaty	*Type F*	J
					SM	0.025	*Type F*	I
					SC	0.026	*Type F*	B
			Group B		MH	0.037	*Type F*	I
					SM	0.035	*Type F*	J
					SC	0.041	*Type F*	B
					ML-CL	Peaty	*Type F*	I
					CL	0.033	*Type F*	C
					CL	0.036	*Type D*	B
					SC-CL	0.040	*Type F*	C
Upper Cooma Creek (uc)	non cohesive soils, high wind and water erosion hazards; high watertables, seasonal waterlogging and flooding in low areas, general threat to foundations	na	Group C	none	CL	0.011	*Type F*	H
					CL	0.029	*Type D*	K
					CL	0.021	*Type D*	K
					CL	0.020	*Type F*	G
Wadbilliga (wa)	steep slopes mass movement, shallow soils and rock outcrop underlying widespread high water erosion hazard; non cohesive soils; high run-on to some low areas; general threat to foundations	32 to 56	Group D	none	PT	Peaty	*Type F*	J
					SC	0.029	*Type F*	B
					GC	0.034	*Type F*	I
Wathonga (wt)	high erosion hazard; localised shallow soils and rock outcrop; localised high watertables and waterlogging of some low areas; localised risks to foundations	6 to 15	Group B/D	none	SM	0.029	*Type F*	I
					ML	0.060	*Type F*	I
					CL	0.049	*Type D*	D
			Group C		ML	0.045	*Type F*	I
					MH	0.077	*Type D*	E
					CL	0.056	*Type D*	D

Table 28 Narooma Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
				CL	0.032	*Type D*	J
				CH	0.044	*Type D*	D
	Group C/D			ML	0.044	*Type F*	B
				CL	>0.094	*Type F*	K
				CL	0.033	*Type D*	D
				SP	0.000	*Type C*	J
Murrah (mu; mub; muc)	Group B/C	0.57	sporadic	OL	0.038	*Type F*	J
		(mub)0	(mub) none	SM	0.037	*Type D*	J
		(muc) 0	(muc) none	SM	0.042	*Type D*	J
				CH	0.018	*Type D*	A
	Group B			OL	Peaty	*Type F*	J
				SP	0.036	*Type F*	J
Nangudga (na)	Group D	82.02	endemic	OL	Peaty	*Type D*	J
				OL	0.047	*Type D*	J
				ML	0.043	*Type D*	D
	Group C/D			PT	Peaty	*Type D*	J
				ML	0.047	*Type F*	A
				SP	0.005	*Type C*	J
	Group C			OL	0.034	*Type F*	J
				ML	0.051	*Type D*	J
				SP	0.009	*Type F*	I
				CL	0.051	*Type D*	D
Pambula (pa)	Group C/D	0.64	sporadic	SM	0.007	*Type F*	J
				CL	0.066	*Type F*	C
	Group B/C			SM	0.014	*Type F*	J
				SM	0.041	*Type F*	nt
				CL	0.048	*Type D*	D
Quondolo (qu)	Group B	0.00	none	SP	Peaty	*Type F*	J
				SP	0.032	*Type D*	nt
				SC	0.052	*Type F*	C
Sheringham Lane (sl)	Group C/D	0.35	sporadic	OL	Peaty	*Type D*	J
				CH	0.022	*Type D*	H
Tathra (ta)		1.48	frequent	SP	0.000	*Type C*	I
				SP	0.003	*Type C*	J
	Group A			SP	Peaty	*Type C*	J
				SP	0.000	*Type C*	J
				SP	0.000	*Type C*	I
				SP	0.000	*Type C*	I
				SP	0.007	*Type C*	J
				SP	0.005	*Type C*	I
				SP	0.000	*Type C*	I
Trunketabella Flat (tf)	Group B/C	46.54	frequent	OL	>0.043	*Type D*	J
				OL	>0.046	*Type D*	J
				ML	0.062	*Type D*	D
	Group B			SM	0.017	*Type F*	J
				ML	0.050	*Type F*	J
				ML	0.067	*Type F*	I
	Group C			SP	0.016	*Type F*	J
				ML	>0.061	*Type F*	J
Tanja (tj)	Group B	1.58	sporadic	SM	0.023	*Type F*	J
				CH	0.029	*Type D*	B
				CL	0.039	*Type D*	B

Table 28 Narooma Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
Bodalla (bd)	Group C	0.13	sporadic	SM	0.013	*Type F*	I
				SM	0.015	*Type F*	J
				CL	0.023	*Type F*	A
	Group B/C			SM	0.019	*Type F*	J
				SM	0.017	*Type F*	nt
				CL	0.023	*Type D*	D
Brou Lake (bl)		13.73	endemic	SP	0.000	*Type C*	J
	Group A			SP	0.002	*Type C*	J
				SP	0.000	*Type C*	J
				SP	0.000	*Type C*	I
				SM	0.004	*Type F*	J
				SM	0.005	*Type C*	nt
Bermagui River (bm)	inapplicable	91.32	endemic	ML	0.063	*Type F*	D
				ML	0.059	*Type F*	D
				ML	>0.054	*Type F*	A
				ML	0.046	*Type F*	B
Bingie (bn)	Group C/D	0.66	sporadic	ML	0.032	*Type F*	A
				CH	0.017	*Type F*	G
				SM	0.041	*Type F*	J
	Group C			SC	0.016	*Type F*	B
				CL	0.056	*Type F*	B
Couria Creek (ck)	Group C/D	21.17	common	OL	0.037	*Type D*	J
				SM	0.001	*Type C*	J
	Group B			OL	0.040	*Type F*	J
				ML	0.038	*Type F*	A
				SM	0.048	*Type D*	J
				SM	0.038	*Type F*	J
				SM	0.005	*Type C*	I
	highly variable runoff			ML	0.043	*Type F*	J
				SM	0.038	*Type F*	I
				SM	0.046	*Type F*	I
	Group A			OL	0.025	*Type F*	J
	Group C			OL	0.017	*Type F*	J
				OL	>0.054	*Type D*	J
				ML	0.066	*Type D*	D
				SM-ML	0.037	*Type F*	J
				OL	Peaty	*Type D*	J
				CL	0.043	*Type D*	D
Coila (co)	Group D	0.23	sporadic	CH	0.023	*Type F*	G
				CH	0.017	*Type F*	H
				SM	0.046	*Type F*	B&I
				SM	0.044	*Type F*	J
Gulaga (gu)	Group C/D	0.00	none	SM	Peaty	*Type F*	J
				CL	0.036	*Type F*	C
				CL	0.037	*Type D*	A
Long Swamp (ls; lsa; lsb)	Group C/D	13.15	endemic	PT	Peaty	*Type F*	J
		(lsb) 0	(lsb) frequent	PT	Peaty	*Type F*	J
				PT	Peaty	*Type F*	J
				OL	0.034	*Type D*	J
				OL	0.016	*Type D*	J
				OL	0.027	*Type D*	J
				PT	Peaty	*Type F*	J
	Group D			OL	Peaty	*Type F*	J

Table 28 Narooma Soil Landscapes

Soil landscape	Soil hydrologic group	Percent area of high acid sulfate soil risk	Acid sulfate risk	USCS Class	K-factor USLE	Sediment type	Sediment basin wall construction (earth)
	Group B			OL	0.022	*Type F*	J
				CL	0.035	*Type F*	B
Tilba Tilba (tt)	Group C	0.00	sporadic	OL	0.027	*Type F*	J
				CL	0.041	*Type F*	B
				SM	0.062	*Type F*	J
				OL	0.016	*Type F*	J
				SC	0.020	*Type F*	A
				CL	0.024	*Type F*	G
				SM	0.041	*Type F*	B&I
Wagonga (wg; wga; wgb)	Group D	0.51	sporadic	SM-ML	0.037	*Type F*	J
		(wga) 3.472198500057	(wga) sporadic	PT	Peaty	*Type D*	J
		(wgb) 0	(wgb) none	PT	Peaty	*Type F*	J
				SM	0.049	*Type F*	B&I
				SM	0.055	*Type D*	J
				SM	0.040	*Type F*	K
				ML	0.057	*Type F*	D
				CH	0.066	*Type F*	C
				SM	0.031	*Type D*	J
				ML	0.071	*Type F*	I

Table C29 Bega-Goalen Point Soil Landcapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Black Ada Swamp (ba)	inapplicable	endemic	PT	Peaty	*Type F*	J
			SC	0.000	*Type C*	I
			SP	0.000	*Type C*	I
			CL	Peaty	*Type F*	J
			CL	Peaty	*Type F*	J
Bemboka (be)	Group B/C	none	SC	0.034	*Type F*	I
			SC	0.027	*Type C*	J
			SC	0.034	*Type F*	D
			CL	0.016	*Type F*	A
			SM	0.038	*Type F*	J
			SM-SC	0.020	*Type F*	B&I/B
	Group D		SM	0.032	*Type F*	J
			SC	0.026	*Type F*	B
	Group B/C		ML	0.022	*Type F*	J
			SW	Peaty	*Type F*	J
			SC	0.016	*Type F*	J
Bald Hills (bh)	Group B/C	none	ML	0.022	*Type F*	C
			CL	0.028	*Type F*	A
			ML	0.025	*Type F*	A
			CL	0.054	*Type D*	D
Biamanga (bi)	Group B/C	none	SC	0.001	*Type C*	J
			CL	0.084	*Type F*	C
			SM	0.038	*Type D*	J
			SC	0.056	*Type F*	C
Bournda (bo)	Group C/D	none	SC	Peaty	*Type F*	J
			SC-ML	0.016	*Type F*	J
			SM	0.052	*Type F*	J
			SC	0.032	*Type F*	B
			SC-CL	0.066	*Type F*	C
			SM	0.026	*Type F*	J
			SC	0.013	*Type F*	B
Brogo Pass (bp)	Grou B/C	none	SM	0.024	*Type F*	I
			SM-SC	0.023	*Type F*	B&I/B
			CL	0.064	*Type F*	C
			ML	Peaty	*Type F*	A
			CL	0.072	*Type F*	C
Glenbog-Coolangubra (gc)	Group D	none	SC	0.034	*Type F*	I
			SC	0.045	*Type F*	B
			SC	0.021	*Type F*	J
			SC	0.032	*Type F*	J
			SC	Peaty	*Type F*	J
			SC	0.016	*Type F*	I
			SM-SC	0.011	*Type F*	I
			SC	0.000	*Type F*	J
			SC	0.029	*Type F*	B
			CL	0.025	*Type F*	G
Goalen Head (gh)	Group C	sporadic	CL	0.032	*Type D*	A
			CL	0.020	*Type D*	B
			CL	0.023	*Type D*	A
			CL	0.037	*Type F*	B
			CL	0.042	*Type D*	B
			CL	0.031	*Type D*	nt
	Group B		SM	0.026	*Type F*	I

Table C29 Bega-Goalen Point Soil Landcapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
			SC	0.022	*Type D*	D
Jingo Creek (ji)	Group D	none	SM	0.033	*Type F*	J
			SM	0.060	*Type F*	J
			SM	0.019	*Type F*	J
			SM	0.049	*Type F*	J
			SC	0.033	*Type F*	B
Jellat Jellat Flat (jj)	Group B	sporadic	ML	0.039	*Type F*	J
			ML	0.036	*Type F*	A
			ML-CL	0.041	*Type F*	B
Kalaru (ka)	Group C	sporadic	SM	0.007	*Type C*	J
			SC	0.033	*Type C*	C
			ML	Peaty	*Type F*	J
	Group B		SM	0.025	*Type F*	J
			SM	0.033	*Type F*	J
			CL	0.024	*Type D*	B
			SC	0.028	*Type D*	B
			SC-ML	0.050	*Type D*	D/E
Lower Brogo (lb)	Group B	none	SM	0.023	*Type F*	J
			SM	0.034	*Type D*	J
			SM	0.051	*Type D*	J
			SM	0.051	*Type F*	J
Mount Darragh (md)	Group B/C	none	CL	0.045	*Type F*	C
			ML	Peaty	*Type F*	C
			CL	0.031	*Type F*	G
Milligandi (mg)	Group B	sporadic	ML	0.059	*Type F*	J
			SC	0.050	*Type D*	I
	Group C		ML	0.033	*Type F*	J
			SM	0.051	*Type D*	J
			CL	0.034	*Type D*	A
Mumbulla Mountain (mm)	Group C/D	none	SM	0.018	*Type C*	I
			SC	Peaty	*Type C*	J
			SC	0.000	*Type C*	C
Meringola Peak (mp)	Group D	none	SM	0.035	*Type F*	J
			SC	0.024	*Type F*	I
	Group C		SC	0.024	*Type F*	J
			SC	0.028	*Type C*	I
			CL	0.028	*Type D*	G
			CL	0.038	*Type D*	J
			CL	0.031	*Type D*	B
	Group D		SC	0.021	*Type F*	J
Murrah (mu)	Group C/D	sporadic	ML	0.034	*Type D*	J
			CL	0.035	*Type D*	D
			MH	0.025	*Type F*	J
	Group C/D		MH	0.042	*Type F*	J
			ML	0.055	*Type D*	B
			CL	0.054	*Type D*	D
Numbugga-Buckajo Swamps (nb)	Group B	none	ML	0.019	*Type F*	J
			SC	0.009	*Type C*	I
	Group B		SC	0.008	*Type C*	J
			SC	0.003	*Type C*	I

Table C29 Bega-Goalen Point Soil Landcapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ.mm)	Sediment type	Sediment basin wall construction (earth)
Nullica-Gnupa (ng)	Group C/D	none	SC	0.034	*Type F*	I
			SC	0.031	*Type F*	I
			SC	0.032	*Type F*	I
			SC	0.044	*Type F*	I
			CL	0.040	*Type F*	B
Nelson Lagoon (nl)	Group D	endemic	ML	Peaty	*Type F*	J
			MH	0.042	*Type F*	A
			MH	>0.085	*Type F*	C
			ML	Peaty	*Type F*	J
	Group C		ML	Peaty	*Type F*	J
			CL	0.050	*Type D*	D
			SM	0.038	*Type F*	J
Pambula (pa)	Group B	sporadic	SW	0.023	*Type F*	J
			SW	0.026	*Type F*	I
			SC	0.022	*Type F*	C
			SC	0.047	*Type F*	I
			CL	0.036	*Type D*	D
			SM	0.017	*Type F*	J
			SM	0.039	*Type F*	J
			CL	0.016	*Type D*	A
	Group A		SP	0.003	*Type C*	J
			SP	0.000	*Type C*	J
			SP	0.000	*Type C*	I
			SP	0.018	*Type C*	J
Pigeon Box Mountain (pb)	Group C	none	SM-SC	Peaty	*Type F*	B&I/B
			CL	0.042	*Type D*	D
	Group B		SC	Peaty	*Type F*	I
			SC	0.030	*Type F*	D
			SM	0.023	*Type C*	J
			SC	0.028	*Type C*	B
	Group D		SC	Peaty	*Type C*	I
			SC	0.002	*Type C*	I
Penooka Swamp (ps)	Group D	common	CL	0.035	*Type F*	B
			CH	0.027	*Type F*	C
Quoraburagun Pinnacles (qp)	Group A	none	SW	0.037	*Type F*	J
			SW	0.018	*Type F*	J
			SC	0.028	*Type F*	C
			CL	0.054	*Type F*	C
Tathra (ta)	Group A	common	SP	0.000	*Type C*	I
			SP	0.003	*Type C*	J
			SP	Peaty	*Type C*	J
			SP	0.000	*Type C*	J
			SP	0.000	*Type C*	I
			SP	0.000	*Type C*	I
	Group A		SP	0.007	*Type C*	J
			SP	0.005	*Type C*	I
			SP	0.000	*Type C*	I
Tantawangalo Escarpment (te)	Group C/D	none	SC	0.020	*Type C*	J
			SM-SC	0.028	*Type F*	J/B
	Group D		SC	0.012	*Type F*	I
			SC	0.039	*Type F*	B
			SC	0.030	*Type F*	C

Table C29 Bega-Goalen Point Soil Landcapes

Soil landscape	Soil hydrologic group	Acid sulfate risk	USCS class	K-factor USLE (t.ha.h/ha.MJ. mm)	Sediment type	Sediment basin wall construction (earth)
	Group B		SC	0.012	*Type F*	I
			SC	0.026	*Type F*	I
Tanja (tj)	Group B	sporadic	OL	0.024	*Type F*	J
			ML	0.056	*Type F*	I
			CL	0.039	*Type D*	B
	Group D		OL	0.026	*Type F*	J
			CL	0.030	*Type F*	C
Towamba River (tr)	Group B	sporadic	SC	0.023	*Type F*	I
			SP	0.007	*Type F*	I
			SM	0.029	*Type F*	I
			SC	0.020	*Type F*	I
			OL	0.021	*Type F*	J
Tura (tu)	Group A/B	sporadic	SC	0.019	*Type F*	J
			SM	0.012	*Type F*	J
			SC	0.016	*Type F*	I
			SC-CL	0.002	*Type F*	B/A
			SP	0.000	*Type C*	I
Wadbilliga (wa)	Group D	none	SC	0.029	*Type F*	J
			GC	0.034	*Type F*	C
			PT	Peaty	*Type F*	J
Whipstick Creek (wc)	Group C/D	none	SC	0.026	*Type F*	B
			CL	0.030	*Type F*	A
			SM-SC	0.017	*Type F*	J
			SM-SC	0.035	*Type F*	J/B
			CL	0.054	*Type F*	C
			SM	0.013	*Type C*	nt
			CL	0.030	*Type D*	J
Wallagoot Foredune (wf)	Group A	widespread	SP	0.000	*Type C*	J
			SP	0.000	*Type C*	J
Wapengo Lake (wl)	inapplicable	widespread	SP	0.000	*Type C*	J
			SP	0.000	*Type C*	J
			ML	Peaty	*Type F*	B
Wolumla Creek (wo)		none	CL	0.026	*Type F*	G
			SC	0.031	*Type F*	A
	Group C		CH	0.021	*Type F*	J
			CL	0.027	*Type D*	B
			GC	0.000	*Type C*	I
			SC	0.005	*Type C*	I
			CH	0.020	*Type D*	H
			CL	0.043	*Type D*	E
			SC	0.036	*Type F*	J
Yellow Pinch (yp)	Group D	sporadic	SM	0.025	*Type F*	J
			SM	0.031	*Type F*	J
			SC	0.030	*Type F*	I
			SC	0.032	*Type F*	D
			CL	0.022	*Type F*	A
			CL	0.035	*Type D*	B
			CL	0.040	*Type D*	D
			MH	0.042	*Type F*	J
			CL	0.045	*Type D*	D
			CL	0.043	*Type F*	B

APPENDIX D

D Use of Erosion Control Products

Introduction

Erosion control products, particularly geosynthetic materials, are becoming increasingly popular for earth stabilisation, seepage control, pollution containment and other land-based applications to protect soils. They protect the soil from erosion by reducing raindrop impact, reducing the velocity of overland flow and increasing infiltration. Also, they minimise sediment and nutrient pollution of downslope lands and waterways.

These erosion control products have many advantages over traditional engineering practices, not the least of which is the enhancement and greater use of natural soil–water–plant systems. They include range of materials such as composted mulches that give the opportunity to use recycled materials in environmentally beneficial applications. Further, recycled materials reduce our impact on the environment by minimising the extraction of natural resources.

This section has been included to provide a broad insight into the scope and opportunities offered by erosion control products. However, to cover their diversity and complexity, grouping them into classes related to their manufacture and application has been necessary. This has limitations in that materials within a group can be quite different from one another and have completely different performance parameters at different sites. Some indication of the variety of applications offered by these products can be gleaned from the groupings in Table D1. These represent more than 160 materials available locally.

The intention here is to provide a simplified guide to the use of these products for soil and water management applications in Australia. Manufacturers and distributors all maintain comprehensive information and design services in support of their products and should be consulted for more detailed advice. The Australasian Chapter of the International Erosion Control Association (IECA) and Civil Contractors Federation can help with access to their affiliated manufacturers, distributors and suppliers.

Requirements of land designers, planners and contractors involved in soil and water management include:

- protecting soils from overland water flow
- stabilising soil surfaces against rainfall and erosion
- increasing infiltration
- reinforcing structurally unstable slopes
- controlling sediment-borne pollution
- improving seedbed moisture, temperature and stability
- enhancing vegetative growth in poor soil environments

- reinforcing root-holding ability on steep slopes and waterways
- weed control
- controlling unwanted seepage from landfill
- stabilising streambanks
- providing resistance to wave energy
- improving pavement stability and longevity.

Table D1 offers a rating of the applicability of various groups of erosion control materials for the broad needs of designers, planners and contractors. It is intended as a strategic planning guide to the likely strengths and weaknesses of different groups of materials, and should help in gaining more relevant detailed advice from distributors and suppliers.

Organic Products

A range of organic products is derived from the composting of organic waste materials (predominantly garden wastes). Where these are claimed to be recycled products, they should comply with Australian Standard AS 4454 (2003) Composts, Soil Conditioners and Mulches. Commercially available products suitable for site rehabilitation works include composted mulches and soil conditioners, and organic soil blends. Properly composted materials are stable, free from disease and pathogens, and are in a form that benefits plant growth.

The main applications for organic products are:

- Composted coarse mulches: Applied as a surface covering, 50mm to 75 mm deep (50 tonnes per hectare) to control erosion and reduce runoff. Also reduces evaporation and plant stress, and suppresses weeds. Coarser particle sizes, i.e. greater than 15 mm diameter provide superior erosion control. Care is required in placing mulch in the path of concentrated runoff from upstream sources to avoid washout occurring. In such cases, anchoring might be required.
- Composted soil conditioners: Incorporated into on-site soils before respreading to improve soil condition and provide organic nutrients to boost plant growth. Also holds water and suppress plant diseases. Application rates need to suit plant nitrogen and phosphorus requirements.
- Manufactured soils: Soil blends prepared following AS 4419 (2003) Soils for Landscaping and Garden Use with maximum recycled content should be used where imported soils are required. The recycled organic content helps turf/plant establishment and growth, improves aeration, provides nutrients, holds water and suppresses diseases.

Only use recycled organic products that comply with the relevant Australian Standards. Compliance can be shown by one of the following ways:

- Australian Standards certified – At this level, the product has been

independently audited with quality testing and quality system in place. It offers the highest level of assurance.

- Quality endorsed company + batch test certificate – This level offers an independently audited quality system. Batch test certificates are available to show compliance.
- Batch test certificate – This level has a batch test certificate to show compliance. Note that certification must be done on a batch basis.

An "Electronic Product Selector" has been developed to help users select the correct product for their application. This and further information about these products can be accessed at The University of New South Wales's Recycled Organics Unit website, http://www.recycledorganics.com.

Spray-on Erosion Control Materials

Spray-on blankets are convenient alternatives to erosion control blankets (ECB's), particularly in difficult situations like steep inaccessible cut and fill batters or around trees and rock outcrops. Biodegradable mulch materials are carried along with seed, fertiliser and soil binder (soluble glue or bitumen emulsion) in a water-based slurry that can be sprayed to cover quite large areas from a truck-mounted machine. They make up a one-step operation that results in revegetation of otherwise quite poor seedbed conditions. They are generally used to enhance germination of desirable plants, but can be adjusted at application to gain weed control if required. It is not intended to cover commonly used binders here such as soluble bitumen or emulsion-based products.

Temporary, Degradable, Erosion Control Blankets (ECB's)

These are ready-made rollout blankets constructed from materials that are biodegradable and/or photodegradable. They can provide temporary protection from overland flows, but this is ultimately limited to the capability of the permanent grass cover that will be established after they break down:

(a) Biodegradable materials commonly used are jute, coir (coconut fibre), straw or wood shavings that might be enclosed in a net. Traditionally, this net has been nylon or PVC, i.e. this part not biodegradable; however, biodegradable nets are now available that are preferred as they are less likely to trap wildlife.

(b) Photodegradable products are composed of polypropylene fibres. They break down over three to twelve months depending on climate and weather, during which time they protect the surface from raindrop splashes and enhance germination and establishment of seeds sown underneath.

Weed Control Blankets and Mats

Weed control blankets are of similar construction to biodegradable ECB's, but with a thicker mulch layer that prevents light from reaching the soil and promoting weed germination. They are used to support established seedlings and tubestocks by eliminating weed competition until the desirable plants can provide sufficient leaf shading to avert weed competition on their own.

Long Term Non Degradable Turf Reinforcing Mats (TRM's)

These are composed of non degradable materials that furnish erosion protection and extend the erosion control limits of vegetation for the design life of a project. Like ECB's, TRM's provide surface protection from rainfall and runoff, but have the extra facility of combining with the growing plants to reinforce the vegetation's resistance to overland flow. They are installed as an integrated system with a thin layer of seedbed material incorporated into them after fixing. Grasses established as waterway protection using TRM's continue to provide permanent protection from erosion even in high water flows. It is very important that the manufacturer's installation instructions are followed carefully and that TRM's are well anchored to the soil.

Geotextiles

Geotextiles are relatively thin, relatively strong, sheet materials manufactured from polypropylene or polyester fibres. They may be woven (similar to weed mats) or non woven. The stability of many work sites relies on maintaining stable earthen access. Stable pavement needs to be dry and rigid and permanently separated from plastic subgrades. Several geotextiles can maintain the necessary separation between free draining coarse rigid pavement materials and moist poorly draining fines. They achieve this by allowing passage to water, but not soil particles and by having sufficient strength to support the coarser grades and prevent their embedding in the underlying fines. These geosynthetics are used to great advantage where substrate materials have poor strength and drainage characteristics. They are laid over the substrate with coarse graded material on top to provide better pavement life and pollution protection.

Geotextiles are also used in a similar way to ECB's, particularly those that are UV-stabilised, non woven, and have masses of less than 200 grams per square metre. Like ECB's they control erosion from rain splashes and can even be used in temporary diversion channels with concentrated flow (if they are anchored properly). They are light, conform well to irregular surfaces and are relatively easy to deliver and fix to difficult sites. However, due to their close-knit nature, they will not promote vegetation from under seeding and they will need to be removed before final rehabilitation.

Sediment Fences

Sediment fences are one of the commonest techniques used on disturbed lands to capture sediment from overland water flows. They are built down slope of areas disturbed by construction activities, on posts or post and wire fencing, depending on whether it is a self-supporting type or not. Their effectiveness relies on being trenched into the ground to avert undermining. Contrary to popular belief, they are not designed to filter contaminated stormwater. Rather, they are designed to form a temporary barrier to sheet flow such that a stilling basin is formed behind. Suspended solids (particularly fractions coarser than silt) are allowed to settle and may be removed. Consequently, they should not be placed across concentrated flow.

Earth-filled Geotextile Tubes

Recent development of an old technique using sandbags for sediment capture has resulted in sediment barriers being constructed from sand enclosed in continuous geotextile tubing. The tubes are available in various lengths and provide a barrier approximately 150 mm to 200 mm in height.

Floating Sediment Barriers and Silt Curtains

A requirement to protect aquatic areas from sediment pollution leaving construction sites often entails the use of floating sediment barriers or silt curtains suspended in shallow shoreline waters. These are similar to normal sediment fences but they are supported in the water by floats and held vertical by weights. Similar to sediment fences, they are not designed to filter water, but are designed to act as a barrier to flow and form a stilling basin thereby allowing sediment to settle out of suspension. They might not need to extend right to the bed of the water.

Grout Injected Mats

Grout injected mats are prefabricated, two layered geotextile materials that allow concrete armouring to be formed in place and, therefore, meet a site's specific contours. The mats are laid on the surface, cut to fit, and pumped with grout. After the grout is set and cured, the geotextile forming breaks down under UV light to leave the concrete armouring, usually in a net-like pattern that helps vegetation grow in protected niches. The vegetation has the ultimate effect of softening and obscuring the appearance of the armouring for greater infiltration and aesthetic appeal.

Reinforced Turf

Reinforced turf can be grown in place by use of geosynthetic materials as described above (TRM's), or prepared offsite, lifted, rolled and transported onsite where it is rolled

out ready to go. A few geosynthetic-reinforced turf products are available that can be applied directly to high flow situations. These provide immediately high levels of vegetative protection against erosion by overland flow.

Articulated Concrete Mats

These are armouring systems made from separate concrete units joined by flexible geosynthetic links. They allow for movement that can absorb wave energy or subsidence in supporting substrata. They are most useful in steep situations to provide vehicle access for maintenance operations in waterline areas like waterways, sediment basins, gross pollutant traps and wetlands.

Unitary Reinforced Armouring Systems

Unitary reinforced armouring is made up of three-dimensional units assembled onsite and linked to form high levels of protection from erosion and slope instability. They have a high component of aesthetic appeal and environmental integration with vegetation and soils. They can produce wider community acceptance of stabilised cut-and-fill slopes by means of amenable textural treatments and special planting niches.

Cellular Soil Confinement

Cellular Soil Confinement products confine linked units of soil so that they cannot move (in a critical plane) independently from one another. They form a strongly integrated system of armour that allows for surface treatments with a range of materials including trees, grasses and shrubs, and gravel or sand to meet stability, infiltration (in porous pavements) or aesthetic objectives. Cellular Soil Confinement can also be used in multiple layers (with an appropriate fill) to reinforce embankments and provide slope stability in filled embankments.

Wind Barrier Fencing

Wind barriers are usually constructed from "loose weave" geosynthetic materials. They are ideally designed to have a 40 percent porosity that maximises the effective wind shadow of protective fencing. They are light and easily attached to boundary fencing where this is close to the areas requiring protection. These materials are often confused with geotextiles, silt fence and shade cloth and require precise specification and ordering.

Flexible Waterproof Membranes

These geosynthetic materials are designed to form impermeable barriers to liquids. They can be cut and joined onsite to form tailor-made reservoirs, or capping for water containment. Various reinforced and unreinforced materials are available for different applications. Mostly, they are all highly resistant to UV degradation and to most chemicals.

Vertical Soil-moisture Barriers

These are specialised systems for containing underground pollutants and preventing their escape to outside environments. They are constructed from interlocking high-density polyethylene (HDPE) modules that join to form watertight and gas-tight seals. They are suited to the control of methane and contaminated waters in industrial and landfill applications. Diaphragm wall techniques or single pass trenching can be used for their installation. Barriers penetrate naturally occurring impermeable horizons forming a watertight, gas-tight seal underneath that prevents leakage.

Geosynthetic Clay Liner (GCL's)

Sealing of earthen structures with swelling clay materials such as bentonite has been practised with varying success for many years. Composite geosynthetic materials, which incorporate the low hydraulic conductivity properties of bentonite with the structural properties of geotextiles, are known as GCL's. They are a means of ensuring a uniform distribution of bentonite is easily applied over a wide area. Materials are cut to fit the site, confined under an earthen overburden of at least 300 mm and allowed to moisten and swell. The resulting seal has a very low permeability, typically 5×10^{-11} m/s. They have great application in containing moisture and pollutants in situations such as landfills and ponds.

Subsurface Drainage Systems

Modern prefabricated subsurface drainage systems are composites of plastic drainage cores wrapped in geotextile filters. They are modular units with strip or box sections for easy alignment across the direction of flow. Specialised designs are available for drainage of retaining walls and revetments, subsoil drainage or drainage of roads, sports fields and racetracks.

Pipe Inlet Sediment Barriers

Sediment from construction sites is a major source of pollution and adds significantly to the maintenance expenditures of local authorities if it is allowed to enter trunk drainage systems. Many designs and products are available for preventing sediment gaining access to drop inlets and kerb inlets near construction sites. These use geosynthetic materials that separate sediment from stormwater before it can enter the trunk system and sensitive aquatic environments. Proprietary systems have the advantage of not interfering directly in public usage of the area and creating a safety hazard. However, they can temporarily exacerbate local flooding problems and may need specialised equipment for maintenance.

Wattles and Logs

The products are constructed from compressed, durable, organic materials such as straw, coir and jute. Available in logs up to approximately 300 mm in diameter, they provide localised support for soil layers, particularly at the edges of lakes or streams. They may also be placed along the contours of steep slopes to interrupt surface flow and reduce its erosive force. Ultimately they decompose after plants have become fully established. They represent part of a range of landscaping materials that provide a medium for reestablishing important riparian and wetland communities that control pollution and add aesthetic appeal. They support the biotechnology and soft engineering of bank and waterline areas associated with streams, estuaries and wetlands.

Hydraulic Soil Stabilisers

These are proprietary products manufactured from natural gums, polymers or hydrocarbons that penetrate the soil and bind the particles together. They are often diluted with water and sprayed onto the surface at various application rates depending on the soil type and the required design life. Typical design life is three to six months.

Table D1 Erosion Control products for stabilising disturbed lands

Erosion control practice	Type	Effect on vegetation				Controlling erosion and pollution									Constraints
		enhances germination of grass seeds	controls weeds	enhances growth of tubestock	reinforces root-holding ability	protects soil surfaces	reduces runoff	filters or traps sediment	stops seepage	reinforces steep slopes	resists waves	stable in low (<2 m/sec) channel flows	stable in high (>2 m/sec) channel flows	stabilises pavements	
ORGANIC PRODUCTS (can be recycled)															Might need anchoring
Composted Coarse Mulch	16 tonnes per hectare	1	1	1	0	3	3	2	0	0	0	0	0	0	
Composted Coarse Mulch	27 tonnes per hectare	0	2	3	0	3	3	3	0	0	0	0	0	0	
Composted Coarse Mulch	56 tonnes per hectare	0	3	3	0	3	3	3	0	0	0	0	0	0	
Composted soil conditioner	100 L per m^2 (max)	3	1	3	2	1	1	0	0	0	0	0	0	0	Product needs incorporation into existing soil
Manufactured soils	150 L per m^2 (max)	3	1	3	2	1	1	0	0	0	0	0	0	0	
SPRAY ON PRODUCTS															
Hydromulching	1.5 tonnes mulch + 300 litres binder per hectare	3	0	0	0	3	1	1	0	0	0	0	0	0	
Bonded Fibre	5 tonnes fibre per hectare	3	1	1	0	3	2	1	0	0	0	0	0	0	
ROLLED EROSION CONTROL PRODUCTS (RECPs)															Ensure RECP's have intimate contact with subsoils (good preparation), are well anchored and have check slots in conditions of concentrated flow
Biodegradable **ECB's**	Jute mesh	2	1	0	1	2	1	0	0	0	0	1	1	0	
	Coconut fibre mesh	2	1	0	1	2	1	1	0	0	0	1	1	0	
	Curled wood fibre in plastic mesh	3	1	1	1	3	2	1	0	0	0	1	1	0	Nets might trap fauna
	Jute matting (~350 gsm)	3	1	1	1	3	2	1	0	0	0	2	1	0	Allows weed growth
	Jute matting (~600 gsm)	0	3	3	0	3	2	1	0	0	0	2	1	0	Not for grass growth
	Coconut fibre matting (~400 gsm)	3	1	1	1	3	2	1	0	0	0	2	1	0	Allows weed growth
	Coconut fibre matting (~900 gsm)	0	3	3	0	3	2	1	0	0	0	2	1	0	Not for grass growth
Photodegradable **ECB's**	Mesh (< 5 mm openings)	2	0	0	1	2	1	0	0	0	0	1	0	0	Little moisture retention
	Super light weight nonwoven (~30gsm)	2	0	0	1	2	1	0	0	0	0	1	1	0	Little moisture retention; net (if included) can trap fauna
Non Biodegradable **TRM's**	Plastic fibres with netting	2	1	0	3	3	2	1	0	0	3	3	3	0	Ensure soil-filled
	Composite with biodegradable	2	1	0	3	3	2	1	0	0	3	3	3	0	Ensure soil-filled
HYDRAULIC SOIL STABILISERS															
	Polymers/Polyacrylamide (rate depends on type)	0	0	0	0	2	0	0	0	0	0	1	0	0	Needs water supply for application
	Bitumen emulsion (12,000 l/ha)	0	0	0	0	2	0	0	0	0	0	1	0	0	Environmental concerns
TEMPORARY SEEDING															
	Annual	0	1	0	0	3	2	2	0	0	0	1	0	0	Minimum 8 days to establish
	Perennial	0	2	0	0	3	2	2	0	0	0	1	0	0	Needs water supply
INSTANT TURF															
	Kikuyu	0	1	0	0	3	2	2	0	1	0	1	0	0	Needs water supply
	Reinforced turf (pregrown)	0	1	0	3	3	2	2	0	1	1	2	2	0	Needs water supply
OTHER PRODUCTS															
Straw (anchored)	4.5 tonnes per hectare	3	1	1	0	3	3	2	0	0	0	0	0	0	
Weed mat		0	3	1	0	3	0	0	0	0	0	0	0	0	Restricts air and moisture
Geotextile		0	1	1	1	2	0	2	0	2	0	2	1	3	See general note for RECP's above if used in channels
Sediment fences		0	0	0	0	0	1	2	0	0	0	0	0	0	
Earth-filled geotextile tubes		0	0	0	0	0	0	3	0	0	0	0	0	0	Low profile
Floating sediment barriers		0	0	0	0	0	0	3	0	0	1	0	0	0	
Grout injected mats		0	1	0	0	3	0	0	1	0	2	3	3	0	Rigid structure
Gabion Mattresses		0	0	0	0	3	0	0	0	0	3	3	3	1	
Articulated concrete mats		0	0	0	0	3	0	0	0	0	3	3	2	0	
Reinforced armouring systems		0	0	0	0	3	0	0	0	0	3	3	2	0	
Cellular soil confinement		2	0	0	0	3	1	0	0	2	0	2	1	2	Anchor on steep slopes
Wind barrier fencing		0	0	0	0	2	0	1	0	0	0	0	0	0	
Flexible waterproof membranes		0	0	0	0	0	0	0	3	0	0	0	0	0	
Vertical soil moisture barriers		0	0	0	0	0	0	0	3	0	0	0	0	0	
Geosynthetic clay liners		0	0	0	0	0	0	0	3	0	0	0	0	0	
Prefabricated subsurface drainage		1	0	1	0	1	1	0	3	2	0	0	0	2	
Pipe inlet sediment barriers		0	0	0	0	0	0	3	0	0	0	0	0	0	Clean regularly
Wattles and logs		0	0	0	0	2	1	2	0	0	1	1	0	0	Needs pinning

Key to Rating System
0 – not designed for, and has no expected performance in this application
1 – not specifically designed for, but can enhance performance of other measures in this application
2 – generally designed for this application in conjunction with other applications, but performance is less able to deal with the range of conditions met by specific purpose materials
3 – specifically designed to meet a full range of requirements for this application

For information on trade names and suppliers of these products, please phone the office of Australasian Chapter of the International Erosion Control Association on 1800 354 322 or (+61 2) 4677 0901.

APPENDIX E

E Settlement of Dispersed Fines

E1 The Problem

Dispersible soils are those where the clay and fine silt particles (<0.005 mm) disperse into a state of separation into extremely fine colloidal units when exposed to water. These particles can remain suspended in water essentially forever because of common electrical charges on the colloidal surfaces, causing them to repel each other and stay in suspension. Stormwater runoff from exposed dispersible soils typically contains high levels of suspended solids (>500-1,000 mg/L) and turbidity. The failure of dispersed clays to settle is commonly exacerbated by wind-generated turbulence within sediment retention basins.

Settlement of these suspended particles typically requires the application of a chemical agent, which neutralises the surface charges, allowing the particles to settle relatively quickly. This process occurs naturally in estuaries, where fresh water inflows are exposed to a saline environment. This Appendix provides guidance on how chemical agents can be used to reduce the levels of suspended solids and turbidity in stormwater captured by sediment retention basins to an acceptable level, prior to discharge to the environment.

Information about dispersibility in soils at each land disturbance site should be provided in the *SWMP* along with a statement about how it will be managed. For many areas in New South Wales, information on dispersibility can be taken from Tables at Appendix C, together with the 1:100 000 soil landscape mapping available from the Department of Infrastructure Planning and Natural Resources. Information on techniques for managing the dispersible fines is given below.

E2 A Quick Field Test

Where sites might have dispersible soils and confirmation is necessary, a simple procedure that can eliminate the need for laboratory analysis is the "field" Emerson test, a test based on the Emerson Aggregate Test (Emerson, 1967). Here, a sample of soil material is taken from the likely sediment source and worked up as a bolus.[1]

1. A sample of soil is taken that can comfortably fit into the palm of the hand, but ensure first that hands are clean (particularly, free of grease or oil). Water is added very slowly and the sample kneaded until all structure is broken down and the ball of soil just fails to stick to the fingers (it might help to crush the soil structure first with a pestle and mortar and pass it through a 2 mm sieve to remove any gravel or coarser materials). More water or soil can be added to attain this condition that is called the "sticky point", and approximates field capacity for that soil. Continue kneading and moistening until there are no further apparent changes in the soil ball, usually about two or three minutes. The soil ball so formed is called a "bolus". Note: that some soils:
   - (i) feel sticky as soon as water is added, but lose the condition as the bolus is formed – or at least until sticky point is reached;
   - (ii) are far stickier than others; and are very much harder to knead than others, e.g. heavy clays.

Next, a 5 to 10-mm cube of the bolus material is placed gently in a clear glass container containing sufficient distilled water to cover it. It is left to stand undisturbed for about three minutes with any change in condition noted.

One of two results is likely:

- no change will occur
- the sample will slake and/or disperse.[2]

If there is no change or the sample slakes, the sample is not dispersible and further laboratory testing should not be necessary. However, if any of the bolus disperses and goes into suspension (the water near the sample becomes milky), undertake laboratory testing to find out whether more than 10 percent of the soil material is dispersible. Note that the more material that goes into suspension, the more dispersible is that sample. Regular sediment trapping devices are ineffective with soils having more than 10 percent dispersible materials and require artificial methods to help in the settling process or enhance filtration.

E3 Management of Dispersible Fines

E3.1 The Process

Two broad processes can be considered to help reduce suspended solids loads where a significant proportion of these are dispersible fines: coagulation and flocculation. Coagulating agents destabilise colloidal suspensions by neutralising the surface charges allowing settlement; flocculating agents cause the colloidal particles to clump into larger units or "flocs" that can either settle in a reasonable time or be filtered.

Users of flocculating and coagulating agents should also be aware that soils can be dispersible because of either common positive or common negative charges on the colloid surfaces. Users of these agents can start from the premise that, in New South Wales, most colloid surfaces are negatively charged. However, this might not be the case at any particular site.

E3.2 Common Agents

Many agents exist, including gypsum, alum, ferric chloride, ferric sulfate, polyelectrolytes (long-chain natural and synthetic organic polymers) including polyacrylamides (PAMS) and common salt (sodium chloride) or brine. Gypsum, PAMS and alum have traditionally been applied to treat stormwater runoff in New South Wales.

2. Soils that disperse must be distinguished from those that slake. Aggregates of soils that slake break down in water, but do not go into suspension as do dispersible soils, i.e. the particles settle relatively quickly.

When choosing a settling agent, note that:

(i) the trivalent aluminium (Al^{3+}) ion present in alum is 2,000 times more effective than the monovalent sodium (Na^{+}) ion present in salt; and

(ii) the bivalent calcium (Ca^{2+}) ion present in gypsum is only 50 times more effective than sodium (Barnes, 1981).

As such, alum produces a much faster settling rate than gypsum (Goldrick, 1996).

E3.3 Application Rates

Except where discussed at Section E4, below, always apply proprietary settling agents following the manufacturer's instructions as a first premise. Despite this, all sediment basins should be analysed after the first two storm events to determine the actual settling agent application rate and the settling time required. This requirement is because most soils respond differently to any particular settling agent. Standard jar tests are the usual method, undertaken following procedures set by suitably qualified laboratories.

In some situations, preliminary testing of water samples in a laboratory before discharge might be necessary to prove that the suspended solid content is below recommended levels, e.g. where the receiving waters are particularly sensitive. Naturally, all measures and procedures should be mindful of statutory requirements not to pollute waters with sediment or the agent, or from any secondary effects. In these cases, sampling details should be clearly set out in the *SWMP*.

The final application rate should be sufficiently high to permit removal of suspended solids and discharge of treated waters within an acceptable time without polluting waters with the agent itself. A rough field test that approximates an acceptable suspended solids content of 50 milligrams per litre is to fill a clear plastic or glass 65 mm diameter soft drink bottle with the water and hold it up to the light. If seeing very clearly through the sample is not possible, it is probably above 50 milligrams per litre and needs further treatment. Note, though, that materials other than suspended solids can cause water to be discoloured and laboratory testing might be necessary anyway.

E3.4 Some Warnings

Care should be taken with the choice of an agent, its dosing rate and any special conditions to ensure that toxic situations are not created with consequent damage to the ecology – some flocculating agents can become toxic if these matters are not given due consideration. Some, such as alum, have resulted in extensive destruction to large tracts of ecosystems in the United States when not managed properly.

Many New South Wales waters are acidic (pH<7.0) and some are quite so (pH<5.5).[3] The ionic form of aluminium, which is highly toxic, is likely to occur below about pH 5.0 and more likely to occur at even lower pH levels. With the use of aluminium-based settling agents, accurate measurement and treatment of water pH must be undertaken to ensure that values are above 5.5 always. Regular ongoing testing of the runoff water should be undertaken to ensure that the recent exposure of certain soils in the catchment area has not caused pH levels to drop to less than 5.5. Further, any residual concentrations of alum remaining in the supernatant before discharge should not exceed the ANZECC (2000) freshwater quality "trigger value" of 0.055 milligrams per litre for aluminium at pH levels above 6.5.[4]

As for residual polyelectrolytes, ANZECC (2000) suggests that a program of field testing for them cannot be justified because they cannot be measured reliably. They do not bioaccumulate, are highly biodegradable, and do not persist in the environment. Furthermore, the guidelines state that trigger levels for polyelectrolytes have not been established yet. The Responsible Care® Guidelines for Use of Polyelectrolytes are a Code of Practice for their use. When these guidelines are followed, PACIA (1998) suggest that they have very low mammalian toxicities and, generally, are considered to be innocuous materials. Nevertheless, excessive dosing with polyelectrolytes has been shown to:

- result in the release of materials that can kill fish and other aquatic life, especially when in the cationic form
- reduce the effectiveness of the agent.

Care should therefore be exercised in the use of these chemicals in stormwater treatment.

Finally, it is important that an individual on site is charged with the responsibility of overseeing the operations and maintenance of any sediment settling systems. Detailed monitoring and maintenance records should be kept detailing rainfall on site, the

3. Soil pH is a measure of the acidity or alkalinity of a soil. It relates to the concentration of the hydrogen ions (H^+) in the soil solution measured on a negative logarithmic scale of 1 to 14. The concentrations of hydrogen ions are equal to the hydroxyl ions (OH^-) at pH 7, greater below pH 7 (acid) and fewer above (alkaline). In the urban environment, the importance of pH is usually confined to its effect on the availability of elements in the soil and, therefore, possible deficiencies and/or toxicities. Whether these elements are available to plants depends on their solubilities, being available only when in soluble forms. The "essential" plant nutrients are in their most soluble forms around pH 6 to 7.
4. The precipitation reaction that takes place in sediment basins can rapidly reduce the concentrations of alum in the water. Research on the leaching characteristics of alum sludge suggests that the alum is tightly bound to the sediment under both oxidising and reducing conditions at pH ranges between 5 and 7 (Metcalf, 2001). Sufficiently acid water conditions to loosen these bonds are unlikely to occur naturally in New South Wales except near poorly managed acid sulfate soils. Furthermore, pH reduction is unlikely to be induced by the use of aluminium agents themselves. Where aluminium settling agents are used properly, the sediment containing the settling agent is not considered toxic as the aluminium is bound up with the soil particles. It is common practice for the accumulated sediment to be dried on site and incorporated into fills. It should not be placed in a manner where runoff from this material can enter surface water directly.

catchment area(s) being served by the settling system(s), the degree of stabilisation, the volumes of settling agents used, and any other relevant matters.

E4 Two Suggested Methodologies

Two possible approaches to flocculation of sediment-laden stormwater within sediment retention basins are described in the following sections. These approaches differ markedly, from the manual dosing of captured stormwater following the cessation of a storm event (i.e. batch treatment'), through to "real-time" dosing of stormwater during the storm event, typically using some automated dosing system. Manual dosing, such as the most common application of gypsum to sediment basins following storm events, is simple but time- and labour intensive, whereas an automated system is more complex in terms of design and installation, but less intensive in terms of ongoing operation (although still requiring periodic monitoring and maintenance). Consequently, this latter approach may be most suitable for long-term disturbances, where the set-up requirements are most warranted.

The following sections describe these two approaches to the flocculation of sediment basins, comprising the manual dosing of basins using gypsum, and the automated dosing of stormwater using polyaluminium chloride (PAC). Of course, other types of flocculants can be used with either of these approaches, and other methods of dosing may be used. In all cases, managers should ensure that chemical treatment of stormwater is undertaken in a way that ensures that no harmful residual levels of the chemical agent are discharged to the receiving environment while still ensuring the desired degree of settlement.

E4.1 Manual Dosing of Basins Using Gypsum

Gypsum (calcium sulfate) is a relatively insoluble settling agent. Consequently, spreading it very evenly over the entire pond surface is essential for proper treatment of sediment-laden water. Normally, gypsum should be applied at a rate of about 30 kilograms per 100 cubic metres of stored water.

Figure E1 shows a suggested method of gypsum application for larger ponds where spreading evenly by hand is impractical. Ideally, the drum shown in figure E1 should have about a 50 litre capacity and holes about 25–mm diameter drilled on a 150-mm grid so pond water can enter. Constant stirring is necessary with the resultant slurry picked up through the inlet to a pump and sprayed evenly over the pond surface. In some instances, much higher rates of application than 30 kilograms per 100 cubic metres are necessary to achieve an acceptable suspended solids concentration, typically less than 50 milligrams per litre. Rates of up to 100 kilograms have been known to be necessary. As discussed at Section E3.1, above, each pond should be analysed after the first two storm events to determine the actual settling agent application rate and the settling time required.

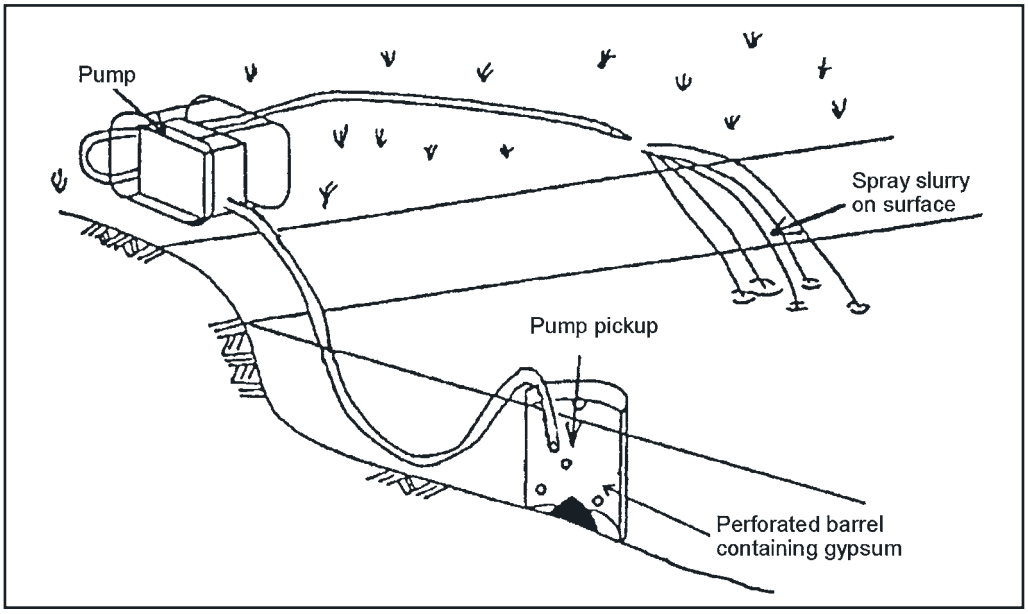


Figure E1. Application of gypsum

Figure E2. Poor gypsum application technique.

Spreading the gypsum evenly over the pond surface is essential. Figure E2 shows gypsum application where the slurry jet enters the water at too large an angle. In this instance, rates of up to 100 kilograms per 100 cubic metres of pond water were required to achieve the necessary water quality. Had the slurry jet entered the water at a much lower angle (e.g. at 10 or 20 degrees from the water surface), lower gypsum dosing rates could have been acceptable.

Assuming the pond is designed to the 5-day, y-percentile depth (Section 6.3.4(c)), adequate settling is required in about four days from the conclusion of each storm event. This will allow one day to pump it out. The critical issue is to ensure the basin is pumped out and ready to receive more sediment-laden water within five days from the conclusion of a storm event. The water can be discharged from the basin once the suspended solid concentration has been lowered to the acceptable level. Treated basins should be dewatered with a system that:

(i) ideally permits drainage of the pond in less than 24 hours ; and[5]

(ii) has a floating inlet to prevent settled sediments being removed as well – it is essential that materials from the sediment layer are not entrained and discharged in the dewatering process.

Of course, if the pond is designed to the 2, 10 or 20-day, y-percentile depth, shorter or longer settling times apply, respectively.

E4.2. Automated Dosing of Stormwater Using Polyaluminium Chloride

The rainfall activated settling system outlined here is based on the use of polyaluminium chloride (PAC) and is adapted from TP90 Flocculation Guidelines prepared for Auckland Regional Council (Beca Carter Hollings & Ferner, 2003). Aluminium settling agents other than PAC, including alum (aluminium sulphate) might also be suitable for use in this system. Irrespective of which agent is used, the system should be designed following Section E3.3, above.

While not as simple in design and operation as the gypsum system described in Section E4.1, above, the PAC system avoids the need for regular pumping out of a sediment basin after rainfall. As such, it could be more suitable where sediment retention basins are designed for the 2-day, y-percentile storm depth or for use at those times of the year when rainfall can occur more frequently than every five days.

(a) General System Details

The general components of the PAC sediment settlement system include a rainfall catchment tray, header tank, displacement tank and settling agent reservoir tank

5. Longer dewatering times are acceptable, so long as the full capacity of the settling zone is evacuated within the time period assumed in the design of the basin (e.g. five days from the completion of the storm event).

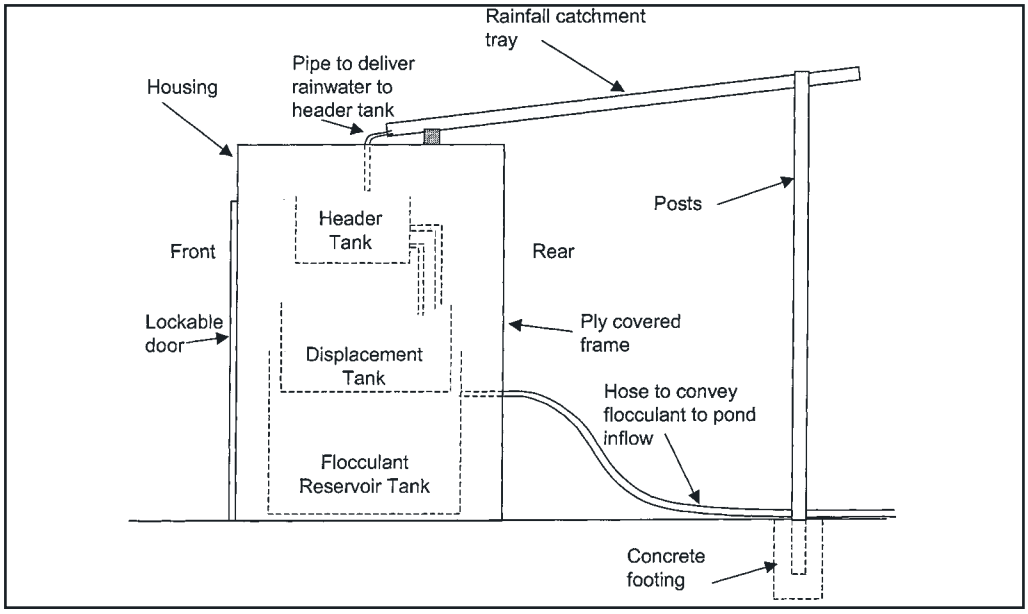


Figure E3. Sediment settlement system components (Beca Carter Hollings & Ferner, 2003).

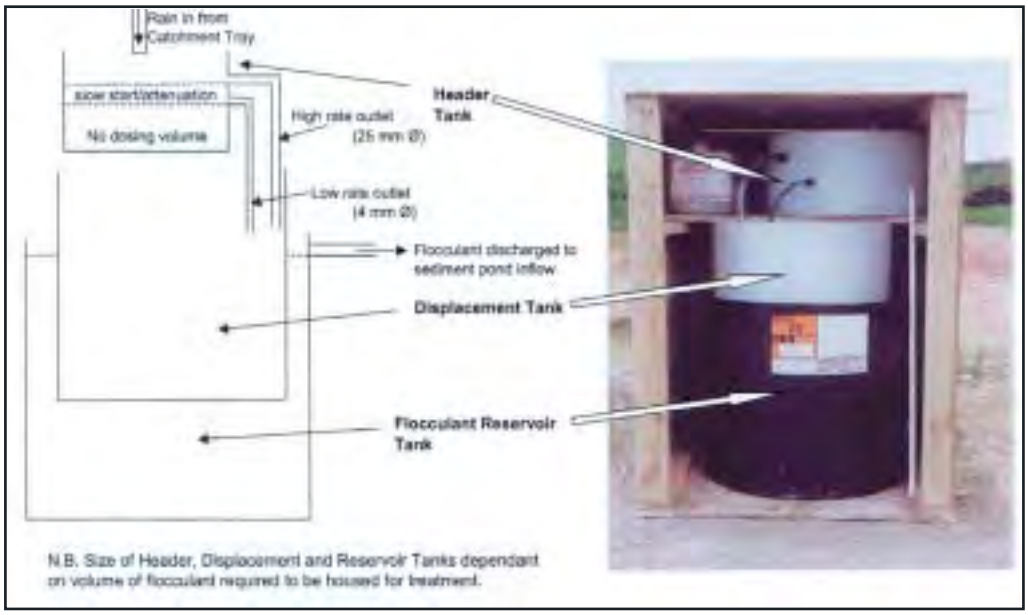


Figure E4. Sediment settlement system dosing details (Beca Carter Hollings & Ferner, 2003).

(figures E3 and E4). Apart from the catchment tray, these should be locked in a housing to discourage vandalism. Further, any settling agent storage area must be bunded to protect the site from spillages or leaks.

Rainfall from the catchment tray drains to a header tank. The header tank provides storage capacity to avoid dosing during initial rainfall following a dry period and attenuate dosing at the beginning and end of a rainfall event (to simulate the runoff hydrograph), i.e.:

(i) zero settling agent discharge occurs until a preselected quantity of rain has fallen to allow for initial infiltration and saturation of dry ground before runoff commences;

(ii) a slow start to the dosing rate occurs to allow for the response time of runoff flowing off the site at the beginning of a storm; and

(iii) an extension of the dosing period beyond the rainfall period occurs to provide treatment of runoff following cessation of rainfall.

From the header tank, the rainwater discharges by gravity into a displacement tank that floats in the settling agent reservoir. As the displacement tank fills with rainwater, the settling agent is displaced through the outlet in the reservoir tank and flows by gravity to the dosing point. The dosing point should be selected in an area of high turbulence in the sediment basin inflow channel.

Important Note: For many soils in New South Wales, the required dose of aluminium is 8 milligrams per litre. One litre of liquid PAC typically contains 64.2 grams of aluminium (based on 10.1 percent of Al_2O_3 by weight). Therefore, 1 litre of PAC should treat 8,020 litres of stormwater at the above dosing rate. Nevertheless, when designing the rainfall tray, the settling agent supplier should be contacted to confirm the actual percentage of Al_2O_3.

(b) Rainfall Catchment Tray

The size of the constructed catchment tray is determined by the size of the catchment draining to the sediment retention pond. Assume all the runoff from disturbed lands should be treated and 60 percent of the runoff from stable lands will require treatment at the design dose rate. The construction of the tray is set out in figure E5.

For the purposes of sizing the tray, a 50-mm storm event is considered. The runoff volume to be treated from 50-mm of rainfall is 500 cubic metres for a 1 hectare catchment. The volume of PAC required to treat 500 cubic metres is 62.3 litres. Given that the density of PAC is 1.2, 74.8 litres of rainwater needs to be collected to displace 62.3 litres of PAC. Further, a tray of 1.5 square metes is required to collect 74.8 litres of rainwater from a 50-mm event. Naturally, a larger tray would be required for a larger contributing catchment area.

Table E1 shows the tray surface areas required for different PAC dose rates.

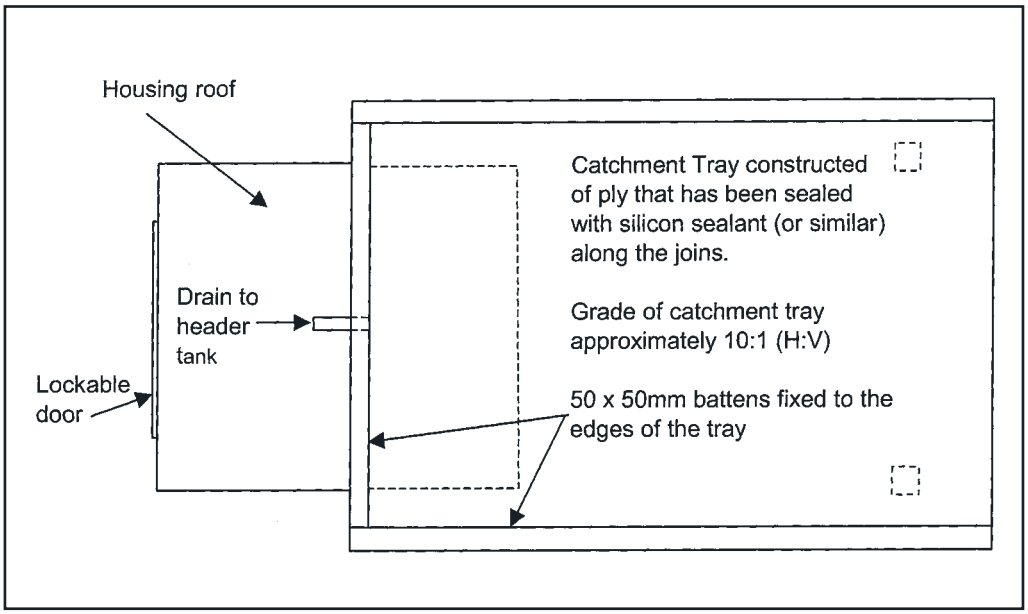


Figure E5. Construction of the catchment tray (Beca Carter Hollings & Ferner, 2003).

Table E1. Rainfall Catchment Tray Areas for Different Aluminium Dose Rates for a 50-mm Rainfall Depth

Aluminium dose required (mg/L)	Catchment tray area per hectare of catchment (m^2)
2	0.375
4	0.750
6	1.125
8	1.500
10	1.875
12	2.250

Assumptions: PAC has 10.1% Al_2O_3 by weight and the whole catchment is disturbed

(c) Header Tank

The zero (settling agent) discharge rainfall volume can be adjusted manually for site characteristics by adding or removing water from the header tank. Both low rate and high rate outlets should be installed:

(i) The low rate outlet consists of a 4-mm internal diameter hose.

(ii) The high rate outlet needs to have sufficient capacity to convey the maximum predicted flow from short-term rainfall, at least covering the 1 in 3 month storm event (unless otherwise stipulated by the local consent authority, this can be taken as half the 1 year, ARI time of concentration event. Generally, a pipe with an internal diameter of 25-mm should suffice, although systems treating large catchments might require larger pipes.

(iii) The slow start/attenuation characteristics can be regulated for site characteristics by providing more than one low rate outlet and at different levels in the header tank.

The standard header tank design provides for up to 10 mm of rainfall before dosing commences. This requires provision of a delayed start volume below the low rate outlet of the header tank of 10 litres per square metre of rainfall catchment tray. So, for a 0.654 square metre catchment tray, the invert of the low rate outlet will be at the height reached by 6.5 L of water within the header tank. The high rate outlet invert should be positioned at that point reached by half the design storm depth. So, for a 0.654 square metre catchment tray, the invert of the high rate outlet will be at the height reached by 16.6 litres of water (33.2/2) within the header tank.

The header tank should have sufficient capacity to contain rainfall without over topping. A 50-mm freeboard above the top of the high rate outlet pipe provides this capacity.

(d) Displacement Tank

The displacement tank needs to be a neat fit inside the settling agent reservoir tank (figure E3). It should have sufficient capacity to provide for the dosing of at least the runoff from the whole of the 90th percentile 5-day rainfall depth from the tray.

(e) Settling Agent Reservoir Tank

The settling agent reservoir tank needs to be only slightly larger than the displacement tank. However, the larger the reservoir and displacement tanks are, the less servicing required. The settling agent reservoir tank requires sufficient capacity to provide for the dosing of at least the runoff from the whole of the 90th percentile 5-day rainfall depth from the tray. An outlet hose needs to be installed in the side of the tank to drain the settling agent to the pond inlet channel.

(f) Maintenance

The maintenance requirements of the PAC settling agent system need assessing following every rainfall event and during rainfall events if exceptionally heavy and/or prolonged rainfall occurs. Before staff leaves the site unattended for weekends, the sediment settling unit requires servicing by the responsible site staff member so that the maximum amount of runoff can be treated by the dosing system.

The following matters outline maintenance requirements for the PAC sediment settlement system. Note that the system will probably require some ongoing manipulation to suit the site characteristics and runoff:

Header Tank

(i) The water level of the header tank is to be set to allow for certain rainfall before dosing starts. When the site is dry, it is estimated that up to 10-mm of rain might fall before significant runoff reaches the sediment retention basin. Therefore the header tank should remain empty in such conditions to allow for a delayed response.

(ii) In wet weather or if the site is generally wet, water can be added manually to the header tank to cut down the response time so that dosing starts more rapidly after rain commences. If the system is to be operated at times of the year when precipitation normally exceeds evaporation (e.g. during winter in some parts of New South Wales), the system should also be set to no delay.

(iii) Adjusting the water level within the header tank is to prevent under or overdosing of the pond. Under dosing can lead to higher levels of suspended sediment being discharged from the pond; conversely, overdosing can cause a reduction in water pH, in turn raising the potential for the aluminium within the PAC to react and forming toxic compounds that are bioavailable to fresh and marine water organisms.

Refilling with Settling Agent

(i) When the volume of settling agent in the reservoir tank is reduced so much that insufficient time is available to dose a major storm, the displacement tank needs emptying and the reservoir refilled.

(ii) The displacement tank can be emptied either by using a siphon or by being baled out by hand. The settling agent reservoir can be filled using a drum pump.

Monitoring and Adjustment for Changing Site Conditions

(i) Each new settling agent treatment system needs to be monitored carefully during the first few rainfall events to check that the system is effective and to ensure that overdosing is not occurring (Section E3.3). Overdosing should be suspected if the pond dead storage water is exceptionally clear – samples must be taken

from the pond for pH and dissolved aluminium analysis. The dosing regime should be adjusted depending on the outcome of these results.

(ii) If overdosing occurs or it is clear that the quality of stormwater runoff is improving because of stabilisation of the site, the settling agent dose must be reduced by reducing the size of the catchment tray. This can be done by placing and sealing a board (batten) diagonally across the tray with a hole through the tray rim at the lower corner, so that water from the tray area above the batten discharges to waste.

(iii) The size of the rainfall catchment tray requires modification if earthworks alter the extent of the contributing catchment. Failure to do so will cause either under or over dosing of flows entering the sediment retention pond.

(iv) Debris such as leaves should be removed from the catchment tray to ensure that rainwater continues to enter the header tank. The low and high rate hoses need to be checked regularly for blockages. All hose fittings should be inspected regularly to identify any leakages.

APPENDIX F

F Runoff Coefficients

F.1 Introduction

Two types of runoff coefficients can be used when applying the design criteria outlined in this manual:

- peak flow runoff coefficient
- volumetric runoff coefficient.

This Appendix discusses these coefficients and how they should be applied.

Accurately predicting the coefficient of runoff at construction sites is essential because the information is used in several key calculations, including the sizing of sediment basins and estimating peak flows in various flow conveyance structures . Here, coefficient of runoff relates to the ratio of catchment runoff to the rainfall in a nominated storm event (either in terms of rates or volumes) . It changes from site to site and from time to time in response to:

- catchment shape, size and slope
- drainage patterns
- surface condition, soil type and vegetative cover
- rainfall intensity.

The choice of a particular coefficient of runoff can greatly influence the design of soil and water management structures included in the treatment systems for a particular site. Also, it can be subjective. Accordingly, coefficients of runoff should always be recorded on the *SWMP* along with the assumptions and methods used in their estimation. The value of the coefficient is dependent on the soil hydrologic group and hydraulic factors.

F.2 Soil Hydrologic Group

Four Soil Hydrologic Groups (USDA, 1993) (Appendix C) are discussed below, derived from a consideration of their infiltration and permeability characteristics. The information in Tables F2 and F3, below, has been placed into these four Groups because of their likely effect on the generation of runoff. Vegetation is disregarded because it is usually stockpiled separately or, sometimes, removed from construction sites altogether. The four Groups are:

Group A – very low runoff potential. Water moves into and through these soil materials relatively quickly, when thoroughly wetted. Usually, they consist of deep (>1.0 metres), well-drained sandy loams, sands or gravels. They shed runoff only in extreme storm events.

Group B – low to moderate runoff potential. Water moves into and through these soil materials at a moderate rate when thoroughly wetted. Usually, they consist of moderately deep (>0.5 metres), well-drained soils with medium, loamy textures or clay loams with moderate structure. They shed runoff only infrequently.

Group C – moderate to high runoff potential. Water moves into and through these soil materials at slow to moderate rates when thoroughly wetted. Usually, they consist of soils that have:

- moderately fine (clay loam) to fine (clay) texture
- weak to moderate structure and/or
- a layer near the surface that impedes free downward movement of water.

They regularly shed runoff from moderate rainfall events.

Group D – very high runoff potential. Water moves into and through these soils very slowly when thoroughly wetted. Usually, they consist of soils:

- that are fine-textured (clay), poorly structured, surface-sealed or have high shrink/swell properties, and/or
- with a permanent high watertable, and/or
- with a layer near the surface that is nearly impervious.

They shed runoff from most rainfall events.

Most eastern Australian soils fall into Soil Hydrological Groups C and D. Notable exceptions include aeolian sands in some coastal locations and some alluvial soils. This is different from many soils elsewhere in the world that are more freely draining, often fitting into Groups A and B and being better suited to techniques that include grass swales, infiltration basins and porous pavements.

The best data for identifying the Soil Hydrologic Group are the field-derived subsoil parameters of texture, structure and colour (see "Soil Water Regime" in McDonald *et al.*, 1990). Two other factors can affect choice of the Soil Hydrological Group, namely depth of soil and data on profile water movement.

(a) Depth of Soil

Profile permeability can be limited by the presence of confining layers, e.g. hardpans, bedrock, high watertables, etc. In turn, these layers can influence the coefficient of runoff. Minimum acceptable depths to confining layers are shown in figure F1. Generally, the effect of any such layers can be ignored where depths are greater than these.

(b) Profile Water Movement

Where infiltration rates or saturated hydraulic conductivity (Ksat) data are available, these can be used to help estimate Soil Hydrologic Groups and runoff coefficients using the boundary values listed in Table F1. However, noting that such data are extremely variable and log-normally distributed is important and they should only be used as guides for improving Group estimates.

Important Note: Choosing more than one of the criteria in Section F3 and F4 in any particular subcatchment is reasonable. However, particular choices should be justified.

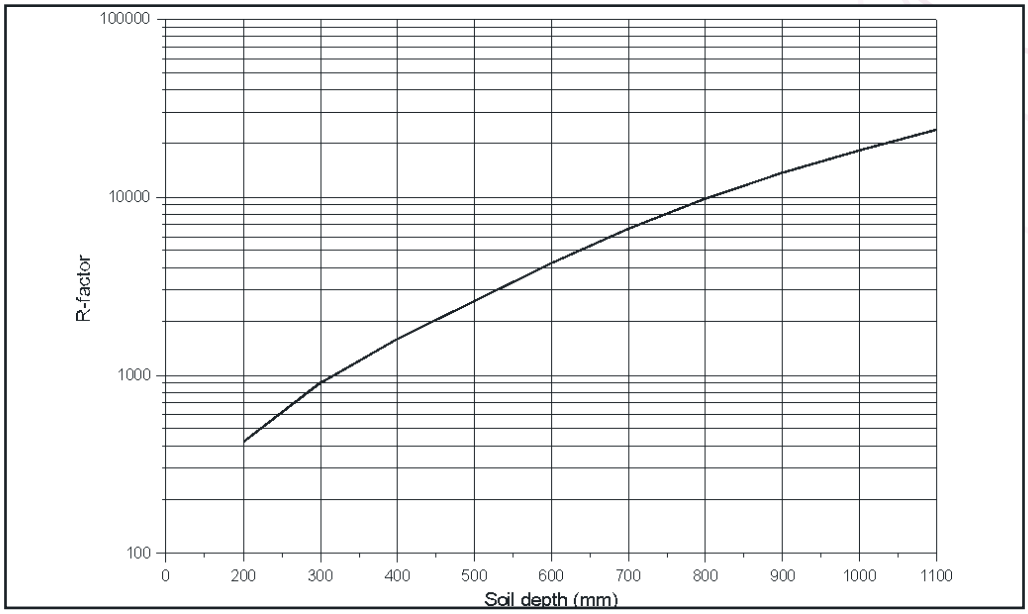


Figure F1 Minimum profile depth where confining layers can affect Soil Hydrologic Group

Table F1 Effect of Ksat and profile infiltration rates on Soil Hydrologic Group

Soil Hydrologic Group	Typical infiltration rate (mm/hr)		K_{sat} (mm/hr)	Rate of infiltration	Runoff potential
	Saturated steady state	Dry soil			
A	25	>250	>120	moderate to very rapid	very low
B	13	200	10-120	moderate to rapid [1]	low to moderate
C	6	125	1-10	slow to moderate [2]	moderate to high
D	3	75	<1	very slow [3]	high

1. Includes soils where the subsoil structure grade is moderate or strong or where the texture is coarser than silty clay.
2. Includes moderately permeable surface soils underlaid by silty clays or silty clay loams with weak sub-angular or angular blocky structures; it includes permeable surface soils overlying massive clays or silty clays.
3. Includes soils where depth is limited by a hardpan, rock, high watertable, or other confining layer.

F.3 Volumetric Runoff Coefficient

Table F2 shows the recommended values for estimating runoff coefficients (Cv) for volumetric data in disturbed catchments and is used in the sizing of sediment basins on Type D and Type F soils. Generally, these structures are designed to contain all the runoff expected from a nominated rainfall depth or storm event.

Table F2. Runoff coefficients (Cv) for volumetric data in disturbed catchments (adapted from USDA, 1996)

Soil Hydrologic Group	Design Rainfall depth (mm)							Runoff potential
	<20	21-25	26–30	31–40	41-50	51-60	61-80	
A	0.01	0.05	0.08	0.15	0.22	0.28	0.37	very low
B	0.10	0.19	0.25	0.34	0.42	0.48	0.57	low to moderate
C	0.25	0.35	0.42	0.51	0.58	0.63	0.70	moderate to high
D	0.39	0.50	0.56	0.64	0.69	0.74	0.79	high

Little data exists in Australia in relation to volumetric runoff coefficients on disturbed lands. So, Table F2 has been determined using the United States Department of Agriculture's Curve Number Method (USDA, 1996).

Where the Soil Hydrologic Group is not known and/or cannot be found out without an additional soil survey (but see Appendix C), adopting a default volumetric runoff coefficient of 0.5 is reasonable. However, higher values should be considered for high-density development or other sites that can be subject to very high levels of surface sealing (e.g. wheel compaction). Alternatively, lower values can be adopted where a significant proportion of the site is to remain undisturbed (i.e. vegetated), if that value is properly justified. However, the correct Soil Hydrologic Group should be determined on all sites where design is to greater than the standard 85th percentile, x-day rainfall depth and/or where the receiving waters are deemed to be highly or extremely sensitive.

F.4 Peak Flow Runoff Coefficient

The peak flow runoff coefficient is used to convert rainfall intensity to a peak discharge in a nominated storm event. The peak discharge is used to:

- calculate settling zone capacities within *Type C* sediment basins
- design pipe outlets from sediment basins
- design spillways from sediment basins, wetlands and similar structures

- design waterways and swales.

Estimates of peak flow runoff coefficients can be made in three distinct areas:

- disturbed catchments (construction sites)
- natural or rural catchments
- urban catchments.

Disturbed Catchments

When areas become highly disturbed, e.g. for development of residential lands, the natural catchment relationships are temporarily affected before more formalised surface and drainage treatments are put in place. This is a critical phase when the potentials for runoff, erosion and sediment transport are constantly changing, but extremely high. During this period:

- construction sites are separated from the larger catchment
- vegetation is removed
- topsoil is stripped and stored on-site
- earthen building materials are imported and stockpiled
- soil surfaces are smoothed, cut, compacted and watered
- bare soil surfaces are reworked by heavy vehicles
- hard surfacing is increased.

Coefficients of runoff on disturbed catchments are also dominated by rainfall, but soil characteristics become much more important, principally the rate at which water can penetrate the soil surface and move through the soil profile. Knowledge of soil texture or grading, structure and soil depth become critical to estimating runoff, erosion and pollution potentials accurately. Vegetation is disregarded because it is usually stockpiled separately or, sometimes, removed from construction sites altogether.

Table F3 shows the recommended values for estimating runoff coefficients (C_{10}) for peak flow data in disturbed catchments. The table should be used only on disturbed lands where peak flow data are required, such as sizing of waterways, catch drains and sediment basins on Type C soils. In this table, soil materials have been placed into the four Soil Hydrologic Groups (Section F2, Appendix C) based on their likely effect on runoff.

Natural or Rural Catchments

Coefficients that relate rainfall to runoff from relatively natural forest or farm catchments are dominated by features like rainfall intensity, vegetation, slope gradient, soil type and rock outcrops. They are also affected by whether the area is ploughed or grazed, or have young, actively growing trees or older mature trees. Because these things are variable, difficult to measure and affect each other differently from time to time, runoff is estimated by adopting average figures based on gauged catchments. This is called the "Probabilistic Rational Method" of estimating catchment runoff. Further details are in Pilgrim (1998).

Table F3 Runoff coefficients (C_{10}) for peak flow data in disturbed catchments

Soil Hydrologic Group	Rainfall intensity (mm) in the design storm						Runoff potential
	<20	21-40	41-60	61-80	81-100	>100	
A	0.20	0.37	0.55	0.64	0.68	0.75	very low
B	0.46	0.58	0.70	0.75	0.78	0.82	low to moderate
C	0.69	0.76	0.83	0.85	0.86	0.88	moderate to high
D	0.80	0.86	0.89	0.90	0.90	0.90	high

Urbanised Catchments

Once catchments have been developed for urban purposes, their runoff characteristics also change. This is caused by the construction of roofs, roads, paved areas, driveways and the like. Hard engineering practices can dominate the relationships between rainfall and catchment runoff, more so than soils, vegetation, rock outcrops and rainfall intensity. Further details are in Pilgrim (1998).

APPENDIX G

G Rehabilitation Recommendations

This section presents information additional to that in Chapters 2 and 7 for application to lands where more than 1,000 square metres will be disturbed. It is not intended for application to construction of individual dwellings except in the unusual situation where *SWMP* is required because more than 2,500 square metres of land will be disturbed or because of a special request by the consent authority.

G.1 Site Assessment

Most projects benefit from a thorough assessment of the existing site conditions, including a soils and landscape analysis (Chapter 2). It should be undertaken before formulating a concept *ESCP* or *SWMP* (Chapter 3). The analysis should cover all relevant environmental factors, including physical and social factors, and be presented in a distilled form suitable for consideration in the site design process. Also, a cost benefit analysis study in the feasibility stage should identify the full order of likely costs. These analyses aid in establishing the theme for the initial soil and water management stabilisation techniques and for the final landscape development program. They include a full account of any future ongoing maintenance costs and likely adverse environmental effects from the use of any introduced species.

Where retention or rehabilitation of natural bushland or native grassland is proposed, it is essential that an initial assessment of the existing vegetation be carried out. Following interpretation of this assessment, any constraints to development should be recognised by all parties involved in the project. Many projects exist where the initial vegetation assessment (including trees) has not been carried out by a specialist and expensive measures have been adopted, only to discover subsequently that some plants:

- are diseased
- have structural defects
- are of an undesirable type, even noxious.

Such vegetation might have to be removed later, probably at much greater expense than otherwise would be the case.

On larger scale projects where a *SWMP* is required, the findings of the site assessment should be documented in a report and/or be illustrated in schematic or detailed drawings. On smaller projects, all aspects can be covered on a single landscape assessment plan. A strategy should be devised with relevant factors included in the plan, including a statement of design principles. These considerations should then follow into:

- the landscape design and documentation prepared by a landscape architect
- project documentation prepared by other members of the project team.

Because of the diverse nature of development programs, it is desirable that specialists,

who have expertise in landscape architecture, soil science and horticulture, are included in the project team. This is particularly important where retention or rehabilitation of natural bushland or native grassland is required or where new plantings consisting of woody species are proposed or required as a condition of local council consent.

To gain the most benefit for the project, the landscape architect is best appointed at the initial concept design stage of the project. Such persons should possess a thorough practical knowledge of horticulture and plant materials (soft landscape work requirements) suitable for the specific site conditions. They may wish to have access to Soil Scientists or other specialist professionals with a good practical understanding of soils. Currently, most landscape architectural practices:

(i) employ a horticulturalist as a member of their team; and

(ii) on particularly sensitive sites, might recommend the engagement of a botanist or other specialist to advise on specialist matters such as identification and recording of:
- indigenous plant communities and their relationships
- archaeologically and geologically significant features, etc.

To find a relevant landscape architect, landscape designer, horticultural consultant, soil scientist, soil conservationist, catchment adviser, or other specialists for selection on the project team, seek advice from your project manager or contact:

The Australian Institute of Landscape Architects (AILA) – contact the National Office Executive Officer, PO Box 1646, Canberra, ACT 2601.

Australian Institute of Horticulture Inc. (AIH) – contact the National Office Administrator, 15 Bowen Crescent, West Gosford, NSW 2250.

The Australian Institute of Landscape Designers & Managers Ltd. (AILD&M) – contact the National Secretary, PO Box 199 Oatley, NSW 2223.

The Australian Society of Soil Science Inc. (ASSSI) – contact the Executive Officer, PO Box 525, Mornington, Victoria 3931.

The Australasian Chapter of the International Erosion Control Association (IECA (Australasia)) – contact the Secretary, PO Box 33 Picton, NSW 2571.

Catchment Adviser, refer Catchment Advisory Manager/Officer of Department of Infrastructure, Planning and Natural Resources.

These people can assess the landscape, soils and horticultural potential of the site and recognise if:

- unfavourable site conditions exist or are proposed
- additional expertise is required in respect of special conditions.

They can make recommendations on how best to retain, modify, remediate or build in the facilities and growth conditions necessary to maintain or achieve successful growth conditions for ongoing soil and water management and future landscaping programs for

the site.

For other useful people, mainly concerned during documentation, tender and construction phases, contact:

National Arborists Association of Australia (NAAA) at PO Box 1184, Dee Why, NSW 2099.

Landscape Contractors Association of NSW Ltd (LCA) at PO Box 1226, Bankstown, NSW 2200.

Irrigation Association of Australia Ltd (IAA) at PO Box 301, Homebush, NSW 2140.

G.2 Species Selection

Grasses

Grassing in its many forms can serve well as a finished surface treatment and equally can provide useful temporary soil stabilisation as an interim measure. Later, it can be readily modified to allow for the full landscaping program.

Most grasses that are acceptable, in an urban context and from a fire hazard management point of view, require the ongoing expense of periodic mowing. On lands where this does not occur, invasions by natural undesirable weed growth including woody species such as lantana, Crofton weed, bitou bush, privet, etc. may occur. In many circumstances the lands also attract a build up of debris from stormwater or wind blown sources.

For information on selection of appropriate grass species to use on broad scale revegetation projects consult:

- your local office of the Department of Land and Water Conservation.
- your local landscape architect who has experience with revegetation work
- an experienced revegetation contractor.

For other sources of information on grasses in urban areas refer to:

- NSW Department of Housing publication Guidelines for Grass Selection in New South Wales (1993).

Woody Species

While quite a wide range of rehabilitation recommendations is covered elsewhere in this manual (Chapter 7), many of these have concentrated on grasses as the main type of plant material to be used for rehabilitation. Grassing generally is simple to install, has a low relative cost for the initial installation and is effective at soil stabilisation in the right situation.

However, it should be recognised that there are situations where grassing is not effective, for example:

- heavily shaded areas
- extremely steep sloping areas with gradients steeper than 2(V):1(H)
- services corridors and access pathways through natural bushland or native grassland areas
- constructed landscape areas previously developed as self care mass planting or wooded areas
- natural scenic areas where intrusion by introducing grass is inappropriate, including sensitive wetland or native fauna habitat areas
- areas that suffer from prolonged periods of inundation by stormwater or saline water
- hardpan, heavily compacted soils and areas subject to dryland salinity, etc.

For information on selection of appropriate plant species to use on revegetation projects consult:

- your local landscape architect who has experience with revegetation work
- your local horticulturalist that has experience with revegetation work.

For other sources of information on grassing in urban areas, refer to the NSW Department of Housing publications Guidelines for Plant Selection in New South Wales with separate volumes for each of five climatic zones as follows:

- Vol. 1 North Coast Climatic Zone (1993)
- Vol. 2 Central and South Coast Climatic Zone (1993)
- Vol. 3 Highlands Climatic Zone (1994)
- Vol. 4 Western Slopes Climatic Zone (1994)
- Vol. 5 Western and Far Western Plains Climatic Zone (1994).

G.3 Fertilisers and Ameliorants

To maximise success on revegetation works, it is essential that the correct soil and growth conditions be provided. A key component here involves the proper selection and application of fertilisers and soil ameliorants. Most soil types in New South Wales require the application of fertilisers and soil ameliorants.

Each site requires specific assessment to find out the most suitable and cost-effective fertiliser and soil ameliorants to be used. This assessment can be carried out by a suitably experienced horticulturalist or landscape architect, providing they have access to reliable soils information including interpretive comments. However, further specialist advice might be necessary from a catchment adviser on larger sites.

Where soils are found to warrant closer examination because of contamination, likely nutrient deficiencies, etc., having soil samples properly collected and analysed is necessary (Section 3.2). The work should be undertaken by a person with suitable

1. Agencies are currently discussing the concept that only certified people will be able to prepare Plans after 1 January 2004.

experience in soil science. Here, suitably experienced people include those certified[1] by the Australian Society of Soil Science. This level of testing and interpretation differs somewhat from civil and structural engineering ground testing used for structural applications. When it comes to detailed analysis of soils for horticultural purposes, suitable specialist advice is offered through various state and Federal Government agencies and/or private consultants.

Most major fertiliser manufacturers can provide soil testing and advisory services on matters relating to the field in which their products occur.

Fertiliser Selection

For successful plant growth to occur it is essential not only to select and use the right plant species for the location, but also to ensure that the right balance of essential elements needed is present in the soil to initiate and sustain growth. In selecting any fertiliser or soil ameliorant, there are many factors that have to be taken into account and these are outside the scope of this publication. Refer Handreck and Black (1994) for in-depth advice on:

- growing media
- soils and the physical and chemical relationships needed for plant growth
- the environmental effects of misuse of fertilisers and associated products.

There are wide ranges of fertiliser and soil ameliorant products available to help with successful planting and ongoing maintenance of grassed and planted areas. Generally, fertilisers should be applied at the manufacturer's recommended rates at least once or twice per annum and additionally as required.

Fertilisers are generally available as bagged materials. However, for broad scale use, some can be obtained in a loose bulk form that can provide considerable cost saving over bagged products. All fertilisers, whether of bagged or bulk products, must be stored in dry locations. Stored fertilisers that have become wet or damp may lose their active constituents to the air and/or will become lumpy and unsuitable for spreading and use.

Fertilisers are prepared with a balance of nutrient elements suitable for the requirements of particular plants. The major elements needed in the greatest quantity are nitrogen (N), phosphorous (P) and potassium (K). Sulfur (S) is also required in lesser amounts for plant growth as are several trace elements but, generally, these are present in sufficient quantities in most soils. By law, manufacturers must provide the necessary chemical analysis of the major elements of N, P and K in their product. This analysis is known as the N:P:K ratio.

There are four main groups of fertilisers:

Inorganic Fertilisers – are manufactured, inorganic products specifically produced as lower cost plant fertilisers or being derived from the by-products of industry. They are described as "specific", "general" or "complete" fertilisers depending on their chemical

constituent(s) and N:P:K ratio. With bulk inorganic fertiliser products, any cost saving derived from the materials handling point of view, where the product is stored on the ground, is offset by the adverse environmental effects left remaining by excess chemical residues in any temporary stockpile areas. There is also the potential for major hazardous leachate on adjoining lands.

Slow Release Chemical Fertilisers – are a refinement on the inorganic-based materials, but:

- to which an external coating has been applied
- release the active constituents into the surrounding soil at slower rates depending on the soil temperature.

Generally slow-release chemical fertilisers are more expensive than the other fertiliser types and are not typically used in grassing work because of cost. However, they are used commonly for revegetation with container grown plants.

Organic Fertilisers – come from a range of natural organic matter or from recycled and composted organic wastes that are naturally rich in the essential elements for plant growth. Typically, they can also consist of one or more of the following materials:

- raw, processed or composted abattoir waste byproducts
- fish and/or seaweed extracts
- processed sewage sludge.

There is a range of other potential organic-based materials that could be composted. However, these products are not acceptable on health grounds, being wastes generated from food production, animal fats and hospital wastes or with other materials that could be derived from wastes. These include hazardous chemicals, e.g. printer's ink, harmful dyes, and the like. Usually, they contain only low levels of nutrients. Any organic wastes used with processed sewage sludge should be composted and processed according to current public health and safety standards set by EPA (1997c).

Because of the nature of the essential elements for plant growth contained in organic fertilisers, the application rates of these types of fertilisers are usually required at much heavier rates than inorganic materials. Often this means that organic-based fertilisers are more expensive than other fertilisers. However, they are far more beneficial to plants and can sustain much healthier plant growth. They help build up the soil structure, tend to release nutrients slowly, and minimise nutrient pollution that otherwise can occur through leaching.

Stockpile waste from organic-based products generally can be more easily cleaned away and due to their nature and typically do not present any adverse long-term effects to the stockpile area and surrounding soil or the local environment.

Blended Inorganic and Organic and Other Fertiliser Products. A wide range of blended products are available that are combinations of the inorganic and organic-based materials and are satisfactory for use in a wide range of circumstances. Tables G1, G2, G3 and G4 suggest some starter and follow-up fertiliser options for grasses and individual plants.

Table G1 Starter fertiliser options for grasses

Fertiliser type	Product	Typical contents				Application rate
		N	P	K	S	(kg/100m^2)
Inorganic complete fertiliser	a	9.1	3.9	4.9	17.5	TBS
	b	9.1	4	4.9	17	TBS
	c	10.4	13.9	8.6	5.6	TBS
Organic-based complete fertiliser	a	7	5.1	5	11.7	TBS
	b	6.6	4.1	5.2	11.8	TBS
	c	3	2.5	1.6	1	TBS
Slow-release inorganic fertiliser	a	25	1	8	0	TBS
	b	15	14	4	0	TBS

TBS = to be specified to suit specific plant size used and/or soil type.

Table G2 Follow-up fertiliser options for grasses

Fertiliser type	Product	Typical contents				Application rate
		N	P	K	S	(kg/100m^2)
Inorganic complete fertiliser	a	9.1	3.9	4.9	17.5	TBS
	b	9.1	4	4.9	17	TBS
	b	17.4	3.6	21.5	3.9	TBS
Slow-release organic fertiliser	a	13	0.5	0	0	TBS
	b	4.6	4.5	5	2.8	TBS
	c	5.4	5.3	0.1	0.1	TBS
	d	3	2.5	1.6	1	TBS
Slow-release pellets	a	16	4.4	8.3	0	Varies
	b	varies	varies	varies	varies	Varies

TBS = to be specified to suit specific plant size used and/or soil type.

Table G3 Fertiliser requirements for individual plants, on a plant-by-plant basis

Fertiliser type	Product	Typical contents				Application rate
		N	P	K	S	(kg/100m^2)
Slow-release pellets	a	20	0	18.8	0	TBS
	b	18	2.6	10	0	TBS
Prolonged-release tablets	a	20	4.3	4.1	1.6	TBS
	b	20	4.3	4.1	1.6	TBS
	c	12	2.6	5	0	TBS

TBS = to be specified to suit specific plant size used and soil type.

Table G4 Fertiliser requirements for individual plants, general surface dressing

Fertiliser type	Product	Typical contents				Application rate
		N	P	K	S	(kg/100m^2)
Blended organic-based	a	6.9	5.2	5.0	11.4	TBS
Organic	a	5.4	5.3	0.1	0.1	TBS
	b	4.6	2.3	3.4	0.0	TBS
	c	4.0	3.1	1.0	0.0	TBS

TBS = to be specified to suit specific plant size used and soil type.

Soil Ameliorant Selection

The need for an ameliorant mostly arises because of factors such as:

- over compaction
- little or no organic matter present
- too acidic (pH less than 5.0)
- high alkalinity levels (pH above 8.0).

These factors can be apparent through poor soil structure and poor plant growth, especially weed growth on soils known to be free of harmful contamination.

Soil ameliorants include:

- gypsum, to alter the chemical structure and thus aeration and permeability of certain problem clay soils by causing clumping of the clay particles and to lessen soil salinity in some soils
- lime, to "sweeten" or render the soil less acid
- sulfur, to make soils more acid
- composts or other suitable organic materials complying with A.S.4454-1997 "Composts, Soil Conditions and Matches", e.g.:
  - spent mushroom compost
  - composted organic tip waste
  - blended proprietary organic products (includes most of the composted materials)
  - composted pine bark and sawdust (suitable for horticultural application)
  - composted bulk animal manures (e.g. composted feed lot cow manure)
  - composted sugar cane tops
  - composted sewage sludge with a biosolid's classification "Unrestricted Use" according to EPA (1997c).
- course, clean or washed sands.

Also, there are many other specialist chemical and water retaining products that can be considered and that might be raised by the specialist adviser during the site assessment stage. They should be thoroughly mixed into the soil by such means as deep cultivation or rotary hoeing. Materials should be free from extraneous matter, salt, persistent weed growth, and substances deleterious to plant growth.

APPENDIX H

H Vegetation Management Plan

(Provided by officers of the Department of Infrastructure Planning and Natural Resources)

1. **Assess the site and determine the constraints:** flora and fauna (previous studies, endangered species, ecological communities and existing vegetation communities, etc.); habitat and corridor values; topsoil/litter layer quality; hydrology/hydraulics (flooding, surface water runoff/drainage, velocities, watertables, etc.); frost areas; fire issues; contaminants; acid sulfate soils; salinity; roads and pathways; railways; airfields; service infrastructure (water, sewerage, gas, electricity, communications); archaeological and heritage; stock and herbivore access (rabbits, hares, ducks, etc.); shadow zones; drainage; topography (slope, aspect, soils, geology, erosion, deposition); weeds and weed sources; risk of vandalism; public safety issues; etc.
2. **Define the project tasks:** describe each task necessary for the implementation of the plan, how each task will be done, the duration of each task, the priority order for each task and who will be responsible for undertaking each task.
3. **Prepare a schedule (e.g. Gant Chart):** address all tasks in the project.
4. **Liaise:** contact council Bushcare Officer, Landcare or Bushcare groups for advice.
5. **Provide details on seed collection and propagation:** local native species only to be used – identify local native seed sources, check on any licences required – identify who will propagate.
6. **Prepare maps/diagrams and plant species lists:** describe existing vegetation, constraints, vegetation and natural features to be retained, proposed vegetation (species/communities, zonation from water to land, corridors/linkages, spacings, tube stock/Virocells/long stems/direct seeding, etc.), sediment and erosion control, stabilisation works, etc.
7. **Provide details on site preparation:**
    - protection of plants to be retained
    - installation of sediment and erosion control devices
    - completion of any site works (if any)
    - weed control (techniques and sequences of removal)
    - application of herbicides
    - topsoil/litter layer storage
    - soil remediation
    - surface preparation (levelling, deep ripping, scarifying, mulching etc.)
    - surface stabilisation – (needs to be suitable for the site/vegetation – erosion matting, mulch, brush matting, sterile cover crops, binding sprays, etc.)
    - site drainage

8. Describe the planting program and method: detail how it will be done, staging and consider the installation of weed mats, mulch, stakes & ties, tree guards and the use of fertilizer types (justify their need), water-retaining crystals, etc.
9. Describe site and vegetation maintenance: sediment and erosion control, watering, replacement of plant losses, weed control, disease and insect control, mulch, etc. (Note: DIPNR requires a minimum of two years maintenance after last plantings completed).
10. Describe the monitoring and review process: include a method of performance evaluation, assessing the need for replacing plant losses, addressing deficiencies and six-monthly reporting.
11. Address other issues: signage, relevant legislation, planning instruments/guidelines, OH&S, community involvement, liaison with DIPNR and others, how other parts of the site and adjacent areas can be managed to compliment the vegetation strategy (weed control, drainage, etc.), etc.
12. Prepare a costing: for the implementation of all stages and all components of the work – show details on unit cost, materials, labour, monitoring/maintenance/reporting, etc.

APPENDIX I

I Management of Waterfront Land

(Provided by officers of the Department of Infrastructure Planning and Natural Resources)

I.1 Introduction

By late 2003, the Water Management Act 2000 (WMA) will have repealed the Rivers and Foreshores Improvement Act, 1948 (RFIA). When this occurs, activities that required Part 3A Approvals under the RFIA will require Controlled Activity Approvals under the WMA. The approval processes will be similar; however the emphasis of Controlled Activities Approvals under the WMA will be:

- to protect and restore water sources
- to ensure minimal harm because of development.

Therefore, a more rigorous assessment process will be implemented for some forms of development.

The Department of Infrastructure Planning and Natural Resources (DIPNR) is developing policies and procedures dealing with the management of development on waterfront (riparian) land. These policies and procedures have not been finalised yet. This Appendix offers insight to those being developed by the DIPNR Resources at the time of publication.

I.2 Principles Governing the Management of Controlled Activities

An emphasis of the WMA is that it focuses more closely on environmental protection and restoration of waterfront land. S. 9 of the Act states that it is the duty of all persons exercising functions under the Act to do so according to the Water Management Principles and to give effect to the State Water Management Outcomes Plan. Specifically, therefore, waterfront land will be managed as follows:

(a) The Objects (s. 3) and Water Management Principles (s. 5) set out in the WMA. It is important to note that the Objects and Principles of the WMA require measures to protect and enhance the social, economic, cultural, spiritual and heritage values of waterfront land for Aboriginal groups and the wider community, and more specifically in relation to controlled activities on waterfront land:

(i) the carrying out of controlled activities must avoid or minimise land degradation, including soil erosion, compaction, geomorphic instability, contamination, acidity, waterlogging, decline of native vegetation or, where appropriate, salinity and, where possible, land must be rehabilitated; and

(ii) the impacts of the carrying out of controlled activities on other water users must be avoided or minimised.

(b) The objects and targets of the State Water Management Outcomes Plan (SWMOP). Specifically relevant to development on waterfront land are Targets 28, 29, 30 and 31 of the SWMOP:

(i) Target 28: Percentage cover of native riparian vegetation within waterfront land increased consistent with an approved catchment management plan or by at least 5 percent where it is currently less than 50 percent of the natural average on 3rd order and larger rivers.

(ii) Target 29: No net decrease in the length of natural river corridors through urban areas.

(iii) Target 30: Coastal floodplain areas with high water quality risk (e.g. acid drainage and/or oxygen depletion) addressed by:

- 30a: Areas of drained natural wetlands identified and mapped
- 30b: Seven pilot remediation projects completed
- 30c: Future program of land rehabilitation developed and commenced
- 30d: No increase in acid drainage resulting from any development in a mapped acid sulfate soil hotspot.

(iv) Target 31: The peak volumes of urban stormwater runoff reaching natural watercourses reduced.

(c) Legislation including the National Parks and Wildlife Act, Fisheries Management Act; and policies including Riverine Corridor Policy and management guidelines (both still under development), NSW Wetlands policy, NSW, Estuaries Policy and NSW Coastal Policy.

I.3 Indigenous Considerations

Aboriginal peoples' understanding of waterways is far more broad and multi dimensional than is allowed for in modern land title practices and topographic maps. Waterways and associated tracks and areas are a vital part of "Dreaming Knowledge" and associated cultural and spiritual practices. Cultural memory and "Dreaming Knowledge" embrace areas beyond the mapped confines of waterways including areas watered in "super-floods" that occur only every thousand or many thousands of years. Past and current practices, "Dreaming Knowledge" and contemporary values underpin a dynamic and developing relationship of Aboriginal groups with waterways that are very much alive today.

The WMA requires Controlled Activity policies to (among other matters) "recognise and foster the significant social and economic benefits to the State that result from the

sustainable and efficient use of water, including benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water". This requires planning, management and impact assessment policies that recognise and encourage:

(i) past and continuing associations with waterways as noted above, including as appropriate preservation of sites of cultural significance (site preservation is just one of several strategies for developing these associations);

(ii) current and emerging social and economic benefits to different Aboriginal groups; and

(iii) a high level of effective involvement of local Aboriginal groups in decision making processes so that the varied values and benefits in particular geographical areas can be identified and improved.

I.4 New Definitions

Controlled Activity is defined in the WMA as:

(a) the erection of a building or the carrying out of a work (within the meaning of the Environmental Planning and Assessment Act 1979), or

(b) the removal of material (whether or not extractive material) or vegetation from land, whether by way of excavation or otherwise, or

(c) the deposition of material (whether or not extractive material) on land, whether by way of landfill operations or otherwise, or

(d) the carrying out of any other activity that affects the quantity or flow of water in a water source.

The controlled activity provisions of the WMA replace and expand on the requirement for a permit to undertake activities on land next to protected waters under the (RFIA). The definitions relevant to waterfront land in the WMA have been amended.

Provisions as Amended *(new words in italics)*:

(i) *estuary* means:
- *(a) any part of a river whose level is periodically or intermittently affected by coastal tides, or*
- *(b) any lake or other partially enclosed body of water that is periodically or intermittently open to the sea, or*
- *(c) anything declared by the regulations to be an estuary, but does not include anything declared by the regulations not to be an estuary.*

(ii) *waterfront* land means:
- *(a) the bed of any river, together with any land lying between the bed of the*

river and a line drawn parallel to, and the prescribed distance inland of, the highest bank of the river, or

- *(a1) the bed of any lake, together with any land lying between the bed of the lake and a line drawn parallel to, and the prescribed distance inland of, the shore of the lake, or*
- *(a2) the bed of any estuary, together with any land lying between the bed of the estuary and a line drawn parallel to, and the prescribed distance inland of, the mean high water mark of the estuary, and*
- (b) if the regulations so provide, the bed of the coastal waters of the State, and any land lying between the shoreline of the coastal waters and a line drawn parallel to, and the prescribed distance inland of, the mean high water mark of the coastal waters, where the prescribed distance is 40 metres or (if the regulations prescribe a lesser distance, either generally or in relation to a particular location or class of locations) that lesser distance.

Land that falls into two or more of the categories referred to in paragraphs (a), (a1) and (a2) can be waterfront land by virtue of any of the paragraphs relevant to that land.

(iii) *lake* includes:

- (a) a wetland, a lagoon, a saltmarsh and any collection of still water, whether perennial or intermittent and whether natural or artificial, and
- (b) any water declared by the regulations to be a lake, *whether or not it also forms part of a river or estuary,* but does not include any water declared by the regulations not to be a lake.

(iv) *river* includes:

- (a) any watercourse, whether perennial or intermittent and whether comprising a natural channel or a natural channel artificially improved, and
- (b) any tributary, branch or other watercourse into or from which a watercourse referred to in paragraph (a) flows, and
- (c) anything declared by the regulations to be a river, *whether or not it also forms part of a lake or estuary,* but does not include anything declared by the regulations not to be a river.

NOTE: For the purposes of Controlled Activity Approvals (and exemptions to approvals) it is proposed that the "blue line" on topographic maps be used to identify watercourses. Watercourses shown on topographic maps as broken blue lines are deemed continuous if they lose definition and then reappear. Watercourses that were previously blue lines and have now been moved are still deemed to be blue lines in the new location.

I.5 Controlled Activity Policies

The DIPNR is in the process of preparing a comprehensive policy paper that deals specifically with controlled activities/development on waterfront land. In addition, supplementary policy papers are being prepared that specifically deal with Controlled Activities in relation to:

- Greenfields urban development sites
- Urban consolidation
- Mining on or under waterfront land
- Public Authorities.

There is a recognised need to take a strategic approach to the implementation of the controlled activity provisions of the WMA. This is to minimise duplication and unnecessary restrictions, while recognising that integrating the implementation of the controlled activity provisions into the existing management framework initiatives is required. These provisions include a planning component (ss. 31, 32, 33, 34(a), (b) and (c)); however it is uncertain at this stage as to how controlled activity planning will be implemented. Most likely these provisions will be used to manage "hotspot" areas. There are also provisions that deal with approvals (s 91) and directions (ss. 326, 327).

As a result, managing controlled activities will be based on a multifaceted approach, including the following:

(a) *Partnerships* – with the general community, Aboriginal groups, industry, local government and other State agencies. In particular, to develop mutual understandings and to encourage best management practise.

(b) *Exemptions* – several exemptions from the requirement for a controlled activity approval are being proposed. These include:

- activities on waterfront land near minor watercourses that are not identified on specified topographic maps
- actions with a beneficial environmental outcome such as removal of noxious plants
- minor 'residential' works in urban areas (such as the building of BBQs)
- construction of works for domestic and stock water supply
- the maintenance of existing structures (so long as there is no extension of the structure over the land)
- regeneration of native vegetation
- activities carried out following the NSW Farm Dams Policy.

There will be limits to these exemptions, for example there will be no exemptions in areas that are of high conservation value, or areas that are deemed to be environmentally sensitive, or areas that are at risk of acid sulphate soils, or for developments that require the removal of native vegetation.

It is proposed that these exemptions will be set in a Regulation that will go before Parliament in late 2003.

Under the RFIA, activities carried out under any lease, licence, permit or other right in force under any Act relating to mining or under the Crown Lands Act or Crown Lands (Continued Tenures) Act 1989 were exempt from the need to obtain a permit. These exemptions have not been carried over in the WMA due to the potential impact that these activities have on waterfront land, and to improve consistency with the management of activities on waterfront land. The RFIA also exempts the activities carried out by public or local authorities – another exemption that has not been carried over to the WMA. However, it is proposed to delay the removal of this latter exemption for one year from the commencement of the controlled activity provisions, as a transitional measure.

(c) *Applications* – It is proposed that an integrated procedures and assessment process be implemented within the DIPNR to help developers with their applications. This process will advise applicants individually of their obligations under the Native Vegetation Conservation Act, the Water Management Act and the Plantations and Reafforestation Act. This process will aim to reward good practice and minimise cost and will provide maximum clarity about where approvals are needed and where they are not.

(d) *Advertising* – The WMA provides for the regulations to specify those applications that are to be advertised and open to third party objections. It is proposed that the following will be advertised:

- sand and gravel extraction on a commercial scale
- clearing of native vegetation over more than 50 metres along the edge of a water course
- realignment of water courses (e.g. straightening, relocation)
- activities on, in or under the bed or bank of fourth order, and above, rivers.

I.6 Controlled Activity Approval Application Process

Applications will be able to be lodged at the Departments regional offices, either in person or by mail. A form will need to be completed to make an application.

In the future, electronic lodgement of applications, for example, by a secure connection on the Department website, will be possible. However, this facility is not yet available. The proposed steps for the lodging of an application are as follows:

- 1. enquiry
- 2. pre-application meeting
- 3. user applies for approval
- 4. DIPNR assesses validity of application i.e. check of information supplied, embargoes, and payment of fees

- 5. application accepted - acceptance recorded in register
- 6. new application is posted on internet register of WMA applications
- 7. if application must be advertised, then it is advertised
- 8. Triage Basic assessment
- 9. full detailed assessment (if necessary)
- 10. third party objections assessed
- 11. evaluation
- 12. determination - application granted/refused, parties and any objectors notified, determination entered into register
- 13. determination information recorded on internet register.

I.7 Information Required with an Application

Applicants will be required to provide a completed application form, information required to support the application and pay any fees. Information required to be provided will include basic information, assessment information and, sometimes, further detailed information. The application form and an accompanying Applicant's Guidelines will advise applicants of details of what is required.

I.7.1 Basic information

Provision of some basic information will help the DIPNR to know the exact nature of the proposed activity, so that the application can be determined according to the legislation. The basic information will include:

(i) the name and address of the applicant (full details required). This will help the Department identify and contact the proponent;

(ii) the address, formal particulars of title, and location of the land on which the controlled activity is to be carried out. This will help the Department to locate the land on which the proposed activity is to be undertaken;

(iii) information showing that the applicant has a legal right to enter the land and carry out the controlled activity. This will help the Department to determine whether the proponent has the right to enter the land and carry out the proposed activity. For example, if the proponent is not the owner, a statement signed by the owner of the land to the effect that the owner consents to the making of the application and the carrying out of the activity will be required;

(iv) permission for Department staff to enter the land to carry out inspections necessary to determine the application. This is a requirement to allow Department assessment staff to confirm information supplied with the application by inspecting the site, and to collect any additional information required to determine the application;

(v) a site plan of the land and a description and plan of the proposed controlled activity, indicating the following:
- the location, boundary dimensions, site area and north point of the land
- the location of the activity in relation to the land's boundaries, and rivers and lakes
- the location of any proposed excavation or deposition of materials, and the existing and proposed finished levels of the land (where these are proposed to be altered)
- existing vegetation on the land
- proposed techniques used to carry out the controlled activity
- proposed revegetation or rehabilitation of the land
- the proposed timeframe for carrying out the components of the activity.

Applicants will need to provide assessment information on the impacts of the proposed activity on a range of environmental, social and economic criteria. This assessment information is required to enable the Department to confirm and evaluate impacts of the proposed activity, in particular the impacts on waterfront land, and to decide whether the application should be approved or refused. The Department will publish Applicants' Guidelines to help applicants to provide this information. These Guidelines will include different levels of comprehensiveness based on the impact of a proposal.

I.7.2 Information required for the assessment of an application will include:

(a) A statement of impacts, addressing the following:

(i) the impacts of the controlled activity on specified environmental, social and economic criteria (including, where necessary, impacts on cultural, spiritual and heritage values of Aboriginal and other community groups). The nature of the requirement for this is to be set out in the proposed environmental assessment guidelines. It is important to note, however, that it is important for relevant planning instruments to identify as far as possible potential impacts and required strategies for dealing with these impacts;

(ii) how the impacts of the controlled activity have been identified; and

(iii) the steps to be taken to minimise the impacts.

(b) Where the proposed controlled activity does not require consent under Part 4 of the EP&A Act, the following information can be required to help the Department to undertake the assessment under Part 5 of the EP&A Act:

(i) an 8-part test under s. 5A of the EP&A Act to assist in determining whether the controlled activity is likely to affect threatened species significantly, populations or ecological communities, or their habitats. If the activity will have a significant effect, then a species impact statement prepared following the Threatened Species Conservation Act, 1995 (TSC Act) will also be required;

(ii) an assessment of the proposed activity that takes into account the factors listed in s. 228(2) or guidelines published by Planning NSW, and an Environmental Impact Statement (EIS) prepared according to the EP&A Act, if required;

(iii) a statement on how the proposed activity compares with best management practices or industry standards, and a management program for the land to which the application relates.

I.7.3 Further detailed information required

Where an application might have major impacts on a criterion, or several criteria, required to be assessed, further detailed information can be required from the applicant, to enable the Department to undertake a proper evaluation and to make an appropriately-informed determination. This further detailed information will be specified in Applicants' Guidelines and specific advice from the Department to the applicant. The Department will endeavour to advise applicants of the detailed information that they are required to provide with their application as early as possible in the process (for example, at any pre-application meeting). However, as the assessment progresses, it might become apparent that further information is required, and the Department can seek this from the applicant at any stage in the assessment process.

I.7.4 Fees for applications

Fees will be charged, however at this stage the schedule of fees is undetermined

I.8 Determination of Applications

I.8.1 Assessment

Among other factors, the assessment can involve the following:

(i) consideration of matters relevant to the application (s. 95(1) WMA) including:
- the water management principles
- the objects of the WMA
- the State Water Management Outcomes Plan
- any matters prescribed by the regulations (s. 96 WMA)
- matters to be considered for possible inclusion in the regulations;

(ii) environmental planning instruments (State Environmental Planning Policies, Regional Environment Plans and Local Environmental Plans);

(iii) planning frameworks (Catchment Blueprints);

(iv) Regional Vegetation Management Plans;

(v) Relevant State policies: Riverine Corridor Policy and Riverine Corridor

Management Guidelines (when available), NSW Wetlands Management Policy and action plan, NSW Coastal Policy, Estuaries Management Policy;

(vi) any other matters included in the Departments guidelines for this purpose.

Policy will be developed that will give the Department and applicants clear guidance about the type of activities or impacts that are likely not to be approved. These will be included in guidelines for applicants along with an estimate of the likely time frame for decisions.

I.8.2 WMA can require multiple approvals

In some cases, the WMA can potentially require multiple approvals for the one activity. For example, construction of a water supply work can require both a work approval and a controlled activity approval, in theory. A mining activity with potential impacts on an aquifer can require both a controlled activity approval and an aquifer interference approval, in theory. In such cases, the enterprise should be able to obtain a single approval through a single, integrated application and assessment process. For example, if approval is sought for approval to construct one pump, then a water supply work approval will suffice for this purpose a controlled activity approval will not also be required. This principle is being built into the development of the Departments Integrated Environmental Assessment Guidelines, and will be made clear to an applicant as early as possible (e.g. a pre-application meeting).

I.8.3 Controlled Activity Approvals and the Native Vegetation Conservation Act.

As a general principle, clearing of native vegetation on protected land will not require both a controlled activity approval under the WMA and also clearing consent under the Native Vegetation Conservation Act 1997 (NVCA).

A proposed activity can involve more than clearing on waterfront land. For example, it can also involve excavation of land and/or construction of a building or other structure such as a jetty. In this circumstance, a controlled activity approval can be required (or other WMA approval) unless a WMA exemption applies.

I.8.4 Integrated development and other cases where authorisation under different statutes is required

Several instances exist where authorisation under the WMA and other statutes can be required for the one activity. These situations can involve integrated development. Integrated development is development that, in order for it to be carried out, requires development consent and a controlled activity approval (or other approval listed under section 91 of the EPA Act). The purpose of the integrated development provisions of the

EPA Act is to streamline development approval where there were a number of approval bodies, including the Department. This process will not change from the process for integrated development currently in place for the RFIA. The Department will continue to be fully involved in the Integrated Development Assessment Scheme.

There are many examples where multiple authorisations can be required. In some cases, a mining activity might require authorisations under the Mineral Resources Act as well as the WMA. In some cases, authorisation under the National Parks and Wildlife Act can be required for activities that might affect Aboriginal sites of cultural or heritage significance.

I.8.5 Security deposits

For some applications, the lodgement of a security deposit can be a precondition to the granting of an approval. Security deposits will be used to improve compliance with conditions of approval, in particular where rehabilitation of the site is required, for example restoring levels or revegetation. Security deposits will be forfeited in response to non compliance with the conditions of consent requiring rehabilitation. The forfeited deposit will be used for rehabilitation of the site. Applicant guidelines will provide further information on procedures in relation to the use of security deposits. It is proposed that a security deposit will be in the form of a bank guarantee.

I.8.6 Register of applications and approvals

Under s. 113 of the WMA, the Department must keep register of applications and a register of approvals, including those granted, renewed, transferred, surrendered, suspended and cancelled. There is no intention to charge a fee for the registering of applications.

The public approval's register is to consist of two parts:

(i) "internet component": – this will not include the following personal information – applicant's name, approval location, conditions, reasons for decision; and

(ii) "non published component": this will include the full details of the approval including the personal information, approval conditions and reasons for decision omitted from (i). This component of the register can only be accessed through a written application to DIPNR.

The approval's register is to include the following information:

(i) all types of approvals including:

- water supply work
- water use
- flood work
- drainage work

- controlled activity
- aquifer interference approvals;

(ii) all applications for new or renewed approvals;

(iii) applications granted;

(iv) all approval applications refused; and

(v) approvals created at transition:
- water supply work and water use approvals converted in July 2003 for areas covered by WSPs
- work and water use approvals converted over four years following July 2003 as new plans are made
- flood work approvals commence conversion in mid 2004
- drainage work approvals commence conversion in mid 2004
- controlled activity approvals "deemed" conversion in November 2003 (note: RFIA permits will not be physically converted to controlled activity approvals. Instead these permits will be legally deemed to be controlled activity approvals. These deemed controlled activity approvals are not to be recorded on the approvals register – this approach is adopted for practical reasons, i.e. the short term nature of these approvals).

APPENDIX J

J Worksheets

J.1 The Standard Worksheet

Note: These "Standard Calculation" spreadsheets relate only to low erosion hazard lands as identified in figure 4.6 where the designer chooses to not use the RUSLE to size sediment basins. The more "Detailed Calculation" spreadsheets should be used on high erosion hazard lands as identified by figure 4.6 or where the designer chooses to run the RUSLE in calculations.

1. Site Data Sheet

Site name: _____

Site location: _____

Precinct: _____

Description of site: _____

Site Area	Site						Remarks
Total catchment area (ha)							
Disturbed catchment area (ha)							

Soil analysis

Soil landscape							DIPNR mapping (if relevant)
Soil Texture Group							Sections 6.3.3(c), (d) and (e)

Rainfall data

Design rainfall depth (days)							See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)							See Sections 6.3.4 (f) and (g)
x-day, y-percentile rainfall event							See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm							See IFD chart for the site
Rainfall erosivity (R-factor)							Automatic calculation from above data

Comments _____

_____

_____

2. Storm Flow Calculations

Peak flow is given by the Rational Formula:

$$Q_y = 0.00278 \times C_{10} \times F_Y \times I_{y,\,tc} \times A$$

where:

- Q_y is peak flow rate (m3/sec) of average recurrence interval (ARI) of "Y" years
- C_{10} is the runoff coefficient (dimensionless) for ARI of 10 years. Rural runoff coefficients are given in Volume 2, figure 5 of Pilgrim (1998), while urban runoff coefficients are given in Volume 1, Book VIII, figure 1.13 of Pilgrim (1998) and construction runoff coefficients are given in Appendix F.
- F_y is a frequency factor for "Y" years. Rural values are given in Volume 1, Book IV, Table 1.1 of Pilgrim (1998) while urban coefficients are given in Volume 1, Book VIII, Table 1.6 of Pilgrim (1998)
- A is the catchment area in hectares (ha)
- $I_{y,\,tc}$ is the average rainfall intensity (mm/hr) for an ARI of "Y" years and a design duration of "tc" (minutes or hours)

Time of concentration (tc) = $0.76 \times (A/100)^{0.38}$ hrs (Volume 1, Book IV of Pilgrim, 1998)

Note: For urban catchments the time of concentration should be determined by more precise calculations or reduced by a factor of 50 percent.

Peak flow calculations, 1

Site	A (ha)	tc (mins)	Rainfall intensity, 1, mm/hr						C_{10}
			$1_{yr,\,tc}$	$5_{yr,\,tc}$	$10_{yr,\,tc}$	$20_{yr,\,tc}$	$50_{yr,\,tc}$	$100_{yr,\,tc}$	

Peak flow calculations, 2

ARI yrs	Frequency factor (F_y)	Peak flows						Comment
		(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	

3. Volume of Sediment Basins: *Type C* Soils

Basin volume = settling zone volume + sediment storage volume

Settling Zone Volume

The settling zone volume for *Type C* soils is calculated to provide capacity to allow the design particle (e.g. 0.02 mm in diameter) to settle in the peak flow expected from the design storm (e.g. 0.25-year ARI). The volume of the basin's settling zone (V) can be determined as a function of the basin's surface area and depth to allow for particles to settle. Peak flow/discharge for the 0.25-year, ARI storm is given by the Rational Formula:

$$Q_{tc,\,0.25} = 0.5 \times [0.00278 \times C_{10} \times F_y \times I_{1yr,\,tc} \times A\,]\ (m^3/sec)$$

where:

$Q_{tc,0.25}$	=	flow rate (m^3/sec) for the 0.25 ARI storm event
C_{10}	=	runoff coefficient (dimensionless for ARI of 10 years)
F_y	=	frequency factor for 1 year ARI storm
A	=	area of catchment in hectares (ha)

Basin surface area (A) = area factor x $Q_{tc,\,0.25}$ m^2

Particle settling velocities under ideal conditions (Section 6.3.5(e))

Particle Size	Area Factor
0.100	170
0.050	635
0.020	4100

Volume of settling zone = basin surface area x depth (Section 6.3.5(e)(ii))

Sediment Storage Zone Volume

In the standard calculation, the sediment storage zone is 100 percent of the setting zone. However, designers can work to capture the 2-month soil loss as calculated by the RUSLE (Section 6.3.5(e)(iv)), in which case the "Detailed Calculation" spreadsheets should be used.

Total Basin Volume

Site	$Q_{tc,\,0.25}$ (m^3/s)	Area factor	Basin surface area (m^2)	Depth of settling zone (m)	Settling zone volume (m^3)	Sediment storage volume (m^3)	Total basin volume (m^3)	Basin shape		
								L:W Ratio	Length (m)	Width (m)
		4100								
		4100								
		4100								
		4100								
		4100								
		4100								

4. Volume of Sediment Basins, *Type D* and *Type F* Soils

Basin volume = settling zone volume + sediment storage zone volume

Settling Zone Volume

The settling zone volume for *Type F* and *Type D* soils is calculated to provide capacity to contain all runoff expected from up to the y-percentile rainfall event. The volume of the basin's settling zone (V) can be determined as a function of the basin's surface area and depth to allow for particles to settle and can be determined by the following equation:

$$V = 10 \times C_v \times A \times R_{y\text{-}\%ile,\ x\text{-}day}\ (m^3)$$

where:

- 10 = a unit conversion factor
- C_v = the volumetric runoff coefficient defined as that portion of rainfall that runs off as stormwater over the x-day period
- R = is the x-day total rainfall depth (mm) that is not exceeded in y percent of rainfall events. (See Sections 6.3.4(d), (e), (f), (g) and (h)).
- A = total catchment area (ha)

Sediment Storage Zone Volume

In the standard calculation, the sediment storage zone is 50 percent of the setting zone. However, designers can work to capture the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(ii)), in which case the "Detailed Calculation" spreadsheets should be used.

Total Basin Volume

Site	C_v	R x-day y-%ile	Total catchment area (ha)	Settling zone volume (m^3)	Sediment storage volume (m^3)	Total basin volume (m^3)

J.2 The Detailed Sheet

Note: These "Detailed Calculation" spreadsheets relate only to high erosion hazard lands as identified in figure 4.6 or where the designer chooses to use the RUSLE to size sediment basins. The "Standard Calculation" spreadsheets should be used on low erosion hazard lands as identified by figure 4.6 and where the designer chooses not to run the RUSLE in calculations.

1. Site Data Sheet

Site name: _____

Site location: _____

Precinct: _____

Description of site: _____

Site Area	Site						Remarks
Total catchment area (ha)							
Disturbed catchment area (ha)							

Soil analysis

% sand (faction 0.02 to 2.00 mm)							Soil texture should be assessed through mechanical dispersion only. Dispersing agents (e.g. Calgon) should not be used
% silt (fraction 0.002 to 0.02 mm)							
% clay (fraction finer than 0.002 mm)							
Dispersion percentage							E.g. enter 10 for dispersion of 10%
% of whole soil dispersible							See Section 6.3.3(e)
Soil Texture Group							See Section 6.3.3(c), (d) and (e)

Rainfall data

Design rainfall depth (days)							See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)							See Sections 6.3.4 (f) and (g)
x-day, y-percentile rainfall event							See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm							See IFD chart for the site

RUSLE Factors

Rainfall erosivity (R-factor)							Automatic calculation from above
Soil erodibility (K-factor)							RUSLE data can be obtained from Appendixes A, B and C
x-day, y-percentile rainfall event							
Slope length (m)							
Slope gradient (%)							
Length/gradient (LS-factor)							
Erosion control practice (P-factor)	1.3	1.3	1.3	1.3	1.3	1.3	
Ground cover (C-factor)	1	1	1	1	1	1	

Calculations

Soil loss (t/ha/yr)							
Soil Loss Class							See Section 4.4.2(b)
Soil loss (m^3/ha/yr)							
Sediment basin storage volume, m^3							See Sections 6.3.4(i) and 6.3.5 (e)

2. Storm Flow Calculations

Peak flow is given by the Rational Formula:

$$Q_y = 0.00278 \times C_{10} \times F_Y \times I_{y,\,tc} \times A$$

where:

- Q_y is peak flow rate (m^3/sec) of average recurrence interval (ARI) of "Y" years
- C_{10} is the runoff coefficient (dimensionless) for ARI of 10 years. Rural runoff coefficients are given in Volume 2, figure 5 of Pilgrim (1998), while urban runoff coefficients are given in Volume 1, Book VIII, figure 1.13 of Pilgrim (1998) and construction runoff coefficients are given in Appendix F.
- F_y is a frequency factor for "Y" years. Rural values are given in Volume 1, Book IV, Table 1.1 of Pilgrim (1998) while urban coefficients are given in Volume 1, Book VIII, Table 1.6 of Pilgrim (1998)
- A is the catchment area in hectares (ha)
- $I_{y,\,tc}$ is the average rainfall intensity (mm/hr) for an ARI of "Y" years and a design duration of "tc" (minutes or hours)

Time of concentration (tc) = $0.76 \times (A/100)^{0.38}$ hrs (Volume 1, Book IV of Pilgrim, 1998)

Note: For urban catchments the time of concentration should be determined by more precise calculations or reduced by a factor of 50 percent.

Peak flow calculations, 1

Site	A (ha)	tc (mins)	Rainfall intensity, 1, mm/hr						C_{10}
			$1_{yr,\,tc}$	$5_{yr,\,tc}$	$10_{yr,\,tc}$	$20_{yr,\,tc}$	$50_{yr,\,tc}$	$100_{yr,\,tc}$	

Peak flow calculations, 2

ARI yrs	Frequency factor (F_y)	Peak flows						Comment
		(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	

3. Volume of Sediment Basins: *Type C* Soils

Basin volume = settling zone volume + sediment storage volume

Settling Zone Volume

The settling zone volume for *Type C* soils is calculated to provide capacity to allow the design particle (e.g. 0.02 mm in diameter) to settle in the peak flow expected from the design storm (e.g. 0.25-year ARI). The volume of the basin's settling zone (V) can be determined as a function of the basin's surface area and depth to allow for particles to settle. Peak flow/discharge for the 0.25-year, ARI storm is given by the Rational Formula:

$$Q_{tc,\,0.25} = 0.5 \times [0.00278 \times C_{10} \times F_y \times I_{1yr,\,tc} \times A\,]\ (m^3/sec)$$

where:

$Q_{tc,0.25}$	=	flow rate (m^3/sec) for the 0.25 ARI storm event
C_{10}	=	runoff coefficient (dimensionless for ARI of 10 years)
Fy	=	frequency factor for 1 year ARI storm
A	=	area of catchment in hectares (ha)

Basin surface area (A) = area factor x $Q_{tc,\,0.25}$ m^2

Particle settling velocities under ideal conditions (Section 6.3.5(e))

Particle Size	Area Factor
0.100	170
0.050	635
0.020	4100

Volume of settling zone = basin surface area x depth (Section 6.3.5(e)(ii))

Sediment Storage Zone Volume

In the detailed calculation on Soil Loss Classes 1 to 4 lands, the sediment storage zone can be taken as 100 percent of the settling zone capacity. Alternately designers can design the zone to store the 2-month soil loss as calculated by the RUSLE (Section 6.3.5(e)(iv)). However, on Soil Loss Classes 5, 6 and 7 lands, the zone must contain the 2-month soil loss as calculated by the RUSLE (Section 6.3.5(e)(v)).

Place an "X" in the box below to show the sediment storage zone design parameters used here:

☐ 100% of settling zone capacity,
☐ 2 months soil loss calculated by RUSLE

Total Basin Volume

Site	$Q_{tc,\,0.25}$ (m^3/s)	Area factor	Basin surface area (m^2)	Depth of settling zone (m)	Settling zone volume (m^3)	Sediment storage volume (m^3)	Total basin volume (m^3)	Basin shape		
								L:W Ratio	Length (m)	Width (m)
		4100								
		4100								
		4100								
		4100								
		4100								
		4100								

4. Volume of Sediment Basins, *Type D* and *Type F* Soils

Basin volume = settling zone volume + sediment storage zone volume

Settling Zone Volume

The settling zone volume for *Type F* and *Type D* soils is calculated to provide capacity to contain all runoff expected from up to the y-percentile rainfall event. The volume of the basin's settling zone (V) can be determined as a function of the basin's surface area and depth to allow for particles to settle and can be determined by the following equation:

$$V = 10 \times C_v \times A \times R_{x\text{-day, y-\%ile}} \ (m^3)$$

where:

10	=	a unit conversion factor
C_v	=	the volumetric runoff coefficient defined as that portion of rainfall that runs off as stormwater over the x-day period
$R_{x\text{-day, y-\%ile}}$	=	is the x-day total rainfall depth (mm) that is not exceeded in y percent of rainfall events. (See Sections 6.3.4(d), (e), (f), (g) and (h)).
A	=	total catchment area (ha)

Sediment Storage Zone Volume

In the detailed calculation on Soil Loss Classes 1 to 4 lands, the sediment storage zone can be taken as 50 percent of the settling zone capacity. Alternately designers can design the zone to store the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(ii)). However, on Soil Loss Classes 5, 6 and 7 lands, the zone must contain the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(iii).

Place an "X" in the box below to show the sediment storage zone design parameters used here:

☐ 50% of settling zone capacity,
☐ 2 months soil loss calculated by RUSLE

Total Basin Volume

Site	C_v	R x-day y-%ile	Total catchment area (ha)	Settling zone volume (m^3)	Sediment storage volume (m^3)	Total basin volume (m^3)

APPENDIX K

K Relevant NSW Legislation

K.1 Environmental Legislation: Urban Areas in NSW

A growing concern is arising within the community that stormwater management needs to be undertaken in an increasingly safe and ecologically sustainable manner. As this awareness evolves, we are finding that the technical, economic, political and social issues surrounding stormwater management are becoming more complex and diverse. In New South Wales, where much of our urban development is close to valuable State-owned beaches and waterways, there are many laws, regulations, policies and guidelines to help protect the environment in NSW and give guidance to business and industry.

Land use planning (LEPs), development control (DCP, DA, BA) and drainage-related powers under the Environmental Planning and Assessment Act and Local Government Act place much of the responsibility for stormwater management with councils.

For soil erosion and stormwater pollution, land developers, owners; builders and utility installers need to ensure that:

(i) land development projects are implemented according to a stormwater management scheme based on ESD principles;

(ii) stormwater management schemes are consistent with any stormwater management plans prepared by council and/or Catchment Management Trusts or Catchment Management Boards

(iii) stormwater management schemes are suited to the natural stability and polluting potential (as indicated by an objective land capability assessment) of the land disturbed by their development;

(iv) development does not exacerbate, and where possible improves, any existing stormwater management problems affecting council or neighbours;

(v) stormwater from development and construction does not degrade any wetland, creek, river, estuary or bushland environment – particularly where this forms habitat for native fauna; and

(vi) stormwater management schemes include approved soil and water management practices with:

- designs that properly reduce the risk of stormwater pollution to a level that is acceptable to council and the surrounding community
- maintenance schedules that provide for proper operation of the treatment practices until erosion and pollution hazards have been permanently returned to predevelopment levels
- sufficient monitoring of the systems and measures to justify claims for proper operational effectiveness.

Everyone needs to be aware of his or her responsibilities for stormwater management under the Protection of the Environment Operations Act 1997, and the Water Management Act, 2000. Landowners, developers, builders and utility providers can be affected by environmental legislation including:

- Environmental Planning and Assessment Act, 1979
- Protection of the Environment Operations Act 1997,
- Water Management Act 2000
- Rivers and Foreshores Improvement Act, 1948
- Native Vegetation Conservation Act 1997
- Soil Conservation Act, 1938
- Catchment Management Act, 1989
- The Local Government Act, 1993
- Fisheries Management Act, 1994
- Actions at Common Law.

K.2 Environmental Planning and Assessment Act, 1979 (EP&A Act)

The EP&A Act establishes a system of environmental planning and assessment under the overview of the Department Infrastructure, Planning and Natural Resources (DIPNR) and, usually, local implementation by Councils. Instruments to allow forward planning for urban stormwater issues at different scales of detail include:

- State Environmental Planning Policies (SEPP)/(DIPNR)
- Regional Environmental Plans (REP)/(DIPNR)
- Local Environmental Plans (LEP)/(council)
- Development Control Plans (DCP)/(council).

These environmental planning instruments state what developments are permissible and whether consent is required from a "Consent Authority" (council) under Pt IV. If Pt IV does not apply, environmental impact assessment takes place under Pt V.

Consent Authorities must review specific "Heads of Consideration" outlined in s. 90 of the Act. "Heads of Consideration" include:

(i) potential of development to affect the physical environment, including any proposals to prevent or mitigate effects that might prove deleterious to neighbourhood values;

(ii) potential to reduce the scenic quality of the locality;

(iii) potential to cause soil erosion and water pollution;

(iv) representations from parties with responsibility or interest in the development site and/or its surroundings; and

(v) matters raised in environmental planning instruments, viz. SEPP, REP, LEP, DCP.

Consent Authorities may:

- approve development as proposed
- approve development with conditions
- not approve development.

In issuing consent, authorities may require a contribution under s. 94 to finance public amenities to meet new demands created by the development. These can include drainage and water quality structures to cope with the increased pollution from urbanisation at the locality.

Authorities cannot require s. 94 contributions to redress past deficiencies in stormwater controls. However, introducing new strategies and techniques that improve stormwater quality is possible for developers, even where degraded by past developments.

K.3 Protection of the Environment Operations Act 1997 (POEO Act)

POEO Act is the main piece of environmental legislation covering water, air, and noise pollution and waste. Under the POEO Act the Department of Environment and Conservation (DEC, incorporating the former EPA) is generally the appropriate regulatory Authority for large industrial and waste facilities (which are licensed by the DEC) as well as for work carried out by local government or its contractors. Local Councils are the appropriate authority for almost everything else.

The POEO Act gives the appropriate regulatory authority the powers to issue clean-up notices, and issue on the spot fines or commence prosecutions where environmental laws have not been complied with. Clean up and prevention notices are issued to require clean-up action when pollution has occurred, or require an activity to be carried out in an environmentally satisfactory manner.

You are required to notify your local council or the DEC, which ever is the appropriate regulatory authority, in the event of a pollution incident, which causes or threatens material environmental harm.

All businesses have a legal and moral responsibility towards the environment. Under the law this is called 'due diligence'. Due diligence means that all employers, managers, directors and occupiers:

- must take all reasonable steps to prevent pollution and protect the environment;
- must promote action to prevent or minimise potential environmental damage;
- must show that all that could have been done to prevent an accident from occurring has been done;
- should make sure that all precautionary and control measures are in place,

and are regularly checked and maintained, to minimise the risk of a pollution incident (these measures might include an environmental management plan, staff training and supervision, and an environmental audit and review process.)

Building site managers have the responsibility to manage the following environmentally degrading and pollution sources:

- air pollution, including dust and smoke
- noise that might interfere with neighbouring lifestyles
- waste discharges including leakage or spills of construction materials, soil, sand, gravel slurries and concrete
- trade and domestic rubbish, including packaging, off-cuts and spoiled materials
- toxic chemicals, including fuels, paints, solvents, sealants, adhesives, lubricants and pesticides.

The Penalties for not acting within the law are divided into Tiers 1, 2 and 3 respectively. The most serious offences (called Tier 1 offences in the POEO Act) are for wilful or negligent breaches that harm the environment. These carry penalties of up to $1 million for a corporation, and up to $250,000 or 7 years imprisonment or both, for an individual.

For Tier 2 offences the maximum penalties for most pollution offences carry penalties of $250,000 for companies and $120,000 for individuals. Minor breaches for water pollution can result in an infringement notice with penalties of $1,500 for companies or $750 for individuals.

K.4 Rivers and Foreshores Improvement Act, 1948

The Rivers and Foreshores Improvement Act, 1948, is administered by DIPNR for regulating operations involving excavation and fill within the immediate vicinity of coastal rivers, lakes and estuaries. Under this Act, a Part 3A Permit is required for the undertaking of works within 40 metres of the bed and banks of a watercourse.

By late 2003, the Water Management Act 2000 (WMA) will have repealed the Rivers and Foreshores Improvement Act, 1948 (RFIA). When this occurs, activities that require a Permit under Part 3A Approvals under the RFIA will require Controlled Activity Approvals under the WMA.

Appendix I provides details of the requirements of to obtain a Controlled Activity approval.

K.5 Soil Conservation Act, 1938

The Soil Conservation Act is administered by DIPNR for the purposes of conserving soil and water resources and mitigating soil erosion. The Act has other specific provisions that are relevant to urban developments. These include:

(i) Section 15A Notices, allow the DIPNR to prescribe measures of erosion and sediment control that must be adopted before a development can go on. These conditions can be pre-emptive. Alternatively, a Notice can stop an offending operation or suspend its progress until proper erosion and sediment controls are instituted. In case of the non compliance with a 15A Notice the DIPNR can undertake the specified work and recover full cost from the developer;

(ii) Section 10 Projects provide a mechanism under which the DIPNR can provide incentives for erosion and sediment control works undertaken cooperatively by land holders for the benefit of community water resources. Such arrangements provide for more effective and efficient measures in erosion and sediment control in upper catchment areas – at a saving to heavily engineered, end-of-pipe solutions.

NB: The protected Land provisions (previously Part 4, Division 2) are now included as State protected land in the Native Vegetation Conservation Act, 1997

K.6 Native Vegetation Conservation Act, 1997

The Native Vegetation Conservation Act is administered by DIPNR for conserving and managing native vegetation and regulating clearing of vegetation according to the principles of ecologically sustainable development.

Clearing of native vegetation, or clearing on protected land, can only be carried out:

- with development consent from DIPNR; or
- if it is consistent with an approved Regional Vegetation Management Plan; or
- if it is consistent with the exemptions is the Act (see section 12 of the Act, and also those carried forward from SEPP 46, the Soil Conservation Act and the Western Lands Act) or
- if it is on land otherwise excluded from the Act (such as part or whole local government areas - see section 9 and Schedules 1 & 2 of the Act).

Where the Act has been, or is about to be breached, DIPNR can impose stop work notices to halt clearing, or remedial notices directing that restoration work be carried out. Offences under the Act, including unauthorised clearing and failing to comply with a notice, are pursued in the Land and Environment Court. The maximum penalty is currently $110,000.

K.7 The Local Government Act, 1993

The Local Government Act empowers councils to construct, control, deliver and manage facilities, services and programs that directly affect the environment. Specifically, it requires councils to "… properly manage, develop, protect, restore, enhance, and conserve the environment for which it holds responsibility …" It gives councils a mechanism for charging a levy on rateable land to help fund its environmental programs.

The Act requires that councils ensure that the development proposals they approve comply with relevant legislation and local policy. Additionally, councils are bound specifically to consider protection of the environment as well as public health and heritage matters.

Approval from council is required for many activities that may affect urban stormwater management.

These include:

- erection, alteration or demolition of buildings
- undertaking work on water supplies
- undertaking work on stormwater drainage systems
- undertaking work to sewerage or other effluent disposal facilities
- connecting private drainage to community systems
- disposing of waste to council sewers
- installing or removing relocatable buildings.

Also, the Act authorises councils to issue s. 124 Orders that require an owner or developer to do, or to refrain from doing, things deemed by council to be in the interests of preventing, constraining or repairing environmental damage to drainage works or natural watercourses. "Environmental damage" in these instances includes unauthorised stormwater drainage works, wastage of water, discharge of prohibited substances, and pollution of public water supplies. Fines are prescribed for offences under this section.

K.8 Catchment Management Act, 1989

The Catchment Management Act provides statutory basis for implementing policies of total catchment management (TCM). Total Catchment Management is a philosophy to balance social, economic and environmental concerns to enable sustainable development. It emphasises sound land and water management in the upper catchment to reduce the need for end-of -pipe solutions in the lower catchments and receiving waters. It provides financial, technical and political means for the resident community and various arms of government to work together for more efficient and effective results in land and water matters.

The Act provides for the appointment of either Catchment Management Trusts or Catchment Management Boards with a brief to coordinate land, water and vegetation management on a catchment-wide basis and in the best interests of the catchment community. This legislation and these arrangements are currently under review, however, to facilitate the establishment and operation of Catchment Management Authorities throughout NSW.

K.9 Fisheries Management Act, 1994

The Fisheries Management Act defines the responsibilities of NSW Fisheries in respect of protecting fisheries and fish habitat. It requires NSW Fisheries to ensure that development do not effect aquatic environments adversely. In this regard approved development must be shown to have either:

- no direct adverse impact on fish and fisheries or
- any unavoidable adverse impacts eliminated by compensatory measures.

The Act specifically requires builders and developers to have proper regard for protecting fish habitats and give NSW Fisheries sufficient information to assess any application for a permit to disturb fish habitats. Where appropriate, developers can be required to prepare a Fish Habitat Protection Plan that will form part of the normal environmental planning process required by the EP&A Act.

Other specific NSW Fisheries' policies include:

(i) tertiary treatment as well as nutrient removal is required wherever a possibility exists that organic pollutants will be discharged to a waterway;

(ii) gross pollutant traps, sediment basins, and artificial wetlands are required to prevent sediment and nutrient pollutants from urban development entering fisheries. An area equivalent to 5 percent of the developed area is to be incorporated into nutrient retention basins;

(iii) proper planning consideration is to be given to dilution, assimilative capacity, and existing uses of waterways likely to receive urban stormwater discharges;

(iv) disposal of polluted stormwater to natural wetlands, seagrass beds and aquatic reserves is prohibited and no outlet is allowed within 50 metres of such an area;

(v) stormwater from roads, car parks and other similar paved surfaces must be discharged well away from aquatic habitats;

(vi) waters likely to have elevated levels of nitrogen and phosphorus must be managed not to encourage outbreaks of blue-green algae;

(vii) discharge of waters likely to carry pesticides and heavy metals that can be bio-accumulated by marine organisms, to waterways, is prohibited; and

(viii) discharge of large volumes of fresh water, likely to re-suspend bottom sediments, reduce salinity by more than 22,000 ppm, raise long-term turbidity, or raise water temperature should be avoided near aquiculture, particularly oyster farms.

K.10 The Water Administration Act, 1986

The Water Administration Act is used by the DIPNR to create a Water Administration Ministerial Corporation with executive powers over the use, flow and control of

community water resources within New South Wales. As such, the Corporation has powers in respect of stormwater received by State-owned waters and has interest in:

- water conservation, supply and replenishment for commercial users
- water quality and pollution control
- flooding
- protection of, and provision for, aquatic environments.

The Act has state-wide coverage but its greatest application is to management of inland river systems.

K.11 Noxious Weeds Act, 1993

The Noxious Weeds Act, 1993, emphasises community cooperation to ensure a coordinated approach to the control of Noxious Weeds throughout New South Wales. It covers rural and urban problems, including environmental weeds.

Section 15 of the Act requires an occupier of land (other than a local control authority) on which there is a notifiable weed to notify the local control authority of that fact within three days of becoming aware that the notifiable weed is on the land. A listing of notifiable weeds is available from local offices of NSW Agriculture.

Penalties range to $10,000 for failing to comply with notices in this regard. Authorities are also able to charge landholders for the cost of any follow-up inspections required after the issue of weed control notices, or for the cost of eradicating noxious weeds where the landholder has failed to comply with a notice.

APPENDIX L

Appendix L

CD Contains:

- Graphs showing Y-percentile, X-day rainfall depths (mm) for 59 sites across New South Wales
- Graphs for interpolation of rainfall depths at locations or for time periods not listed above
- Excel spreadsheets for estimating the size of sediment retention basins (as shown at Appendix J)

APPENDIX M

M Model Code of Practice for Soil & Water Management on Urban Lands

Intent

The following Code of Practice is applicable to urban subdivision and building activities. The Code's purpose is to minimise the effect of soil erosion and stormwater pollution resulting from land development. It is designed to give consent authorities a model that can be easily adapted to their own needs, while also applying to those of government agencies and industry. It seeks to impose the least onerous conditions consistent with ecologically sustainable development.

Scope

All urban development activities are covered by this Code where these might result in pollution of receiving waters and more than 250 square metres of land will be disturbed. The activities include the building of single dwellings through to large-scale, "green field" subdivisions.

Different levels of control are required depending on how much land is being disturbed and the type of activity (Table M1).

Table M1 Scope of requirements for the Code of Practice

Area of Disturbance (m^2)	Nominal type of activity	Scope of works
<250	house extensions, small driveways, garages	not covered by this Code
250 to 2,500	long driveways, most houses, small commercial developments, small subdivisions, medium/high density housing developments, small civil works	*ESCP* Plan addressing soil erosion and sediment pollution only
>2,500	large subdivisions, large civil works, large medium/high density housing, etc.	*SWMP* Plan addressing soil erosion and pollution by sediment, including nutrients held on sediment particles, including a calculation as to the need for a sediment basin

The Code does not address activities that, clearly, are not considered urban "development", such as farming, market gardening, highway construction and equestrian activities. It covers the whole process of construction, from initial planning of urban works through to the completion of the construction phase and subsequent rehabilitation. It outlines requirements for BMPs applicable to the construction phase, including:

- controlling run-on water
- marking out areas to be disturbed
- stripping and stockpiling of topsoil/reshaping the site
- controlling movement of water on, through and off the site
- generally, managing the impacts of works
- rehabilitation (including revegetation).

Other Needs

It is hoped that consent authorities throughout New South Wales will adopt this model Code so that similar standards apply to development. This can be achieved by replacing "[the consent authority]" in this text with the name of the appropriate organisation, e.g. Wollondilly Shire Council. Further, it is anticipated that consent authorities will make available to prospective developers maps of their area of influence at suitable scales (1:25,000) and containing information for:

- soil erodibility
- Soil Loss Classes
- Soil Hydrologic Group
- Soil Texture Group
- percent of whole subsoil likely to be dispersible
- other data relevant to local needs.

Alternately, consent authorities will provide copies of the relevant sections of Appendixes B and C of Managing Urban Stormwater - Soils & Construction, Landcom (2004) and other information about rehabilitation. Nevertheless, it is expected that developers will collect their own site-specific information where:

- the data, above, are not generally available
- the development is regarded as "environmentally sensitive".

Consent authorities might have local needs that go beyond this model Code and will be addressed in other areas.

General Planning Requirements

Unless otherwise marked, each paragraph applies to all urban works' activities, including building, subdivision and infrastructure development.

1. Erosion & Sediment Control Plans (*ESCPs*) are required where between 250 and 2,500 square metres of land will be disturbed for:

(i) single dwellings and other developments if approval is required from the consent authority; and

(ii) minor civil infrastructure works, including:
- urban and minor rural road construction and reconstruction
- stormwater, sewerage and water pipelines, including culverts in urban areas
- bulk earthworks, including retention basins and sports fields
- electricity, telephone and natural gas lines in urban areas.

Nevertheless, [the consent authority] might vary this requirement especially where, in their view:

- a high risk of polluting receiving waters exists, i.e. require a *SWMP*; or
- a very low risk of polluting receiving waters exists, i.e. waive the need for an *ESCP*.

2. Soil and Water Management Plans (*SWMPs*) are required for all development works where more than 2,500 square metres of land will be disturbed and/or where development consent is required.

3. Any *SWMP/ESCP* (Plans) will, when approved, create an agreement of intent between [the consent authority], Government Agencies, Government Business Enterprises, corporations and private landholders. All site works must be carried out following the approved Plan or as varied by the designer with the concurrence of [the consent authority].

4. *SWMP/ESCP* (Plans) must be prepared by suitably experienced people. Suitably experienced people include those approved by the consent authority or those certified[1] by:
   - the Institution of Engineers, Australia, for engineering and hydrology matters
   - the International Erosion Control Association for soil conservation matters
   - the Australian Society of Soil Science for collection or analysis of soil data.

5. Where development consent is not required, earthworks may only be undertaken if:

   (i) the shape of the land is not materially altered;

   (ii) the land on which this work is undertaken is not:
   - regarded as waterfront land (Appendix I)
   - steeper than 1(V):4(H) (approximately 14o from the horizontal)
   - designated by [the consent authority] as geotechnically unstable
   - subject to any other State or Council legislative provisions; and

1. Agencies are currently discussing the concept that only certified people will be able to prepare Plans after 1 July 2004.

(iii) the activity does not:

- affect any native habitat vegetation or tree of significance without the written notice of [the consent authority] (including by lopping, removal, undermining, filling around or otherwise injuring)
- include cut or fill greater than 1 metre
- affect a land area greater than 250 square metres.

6. Any earthworks that cause significant disturbance to the soil surface and are ancillary to any purpose for which [consent authority] approval is required, must not be started before the issue of that approval. Further, these earthworks must only be undertaken following any Plans attached to the approval.

7. A Controlled Activity Approval must be gained from the Department of Infrastructure Planning and Natural Resources (DIPNR) on waterfront land before any of the following works are undertaken:

   (i) the erection of a building or the carrying out of a work (within the meaning of the Environmental Planning and Assessment Act 1979), or

   (ii) the removal of material (whether or not extractive material) or vegetation from land, whether by way of excavation or otherwise, or

   (iii) the deposition of material (whether or not extractive material) on land, whether by way of landfill operations or otherwise, or

   (iv) the carrying out of any other activity that affects the quantity or flow of water in a water source.

The Approval must be submitted to the council before beginning any work.

8. Before the commencement of construction activities, the developer must nominate a representative to [the consent authority] in writing who has authority to:

   - ensure compliance with the conditions in this Code and described on the approved Plan
   - undertake additional practical measures and modify design to prevent or reduce pollution of waters
   - inform [the consent authority] of such additional measures when practicable.

Environmental Bond

9. Before starting construction activities, the applicant must provide to [the consent authority] an environmental bond that takes one of the following forms:

   - a security, such as a Deed of Agreement in a form satisfactory to [the consent authority]
   - a deposit as a bank cheque from an approved financial institution
   - other financial guarantee.

[The consent authority] will permit the bond to be transferred from one development to another.

10. The amount of the bond shall be as follows:

Area of lands to be disturbed (m^2)	Amount
less than 999	nil
1,000 or more	$2,000 plus $1 for each ten (10) square metre of disturbed land in excess of 1,000 to a maximum total payment of $20,000.00

11. An amount may be forfeited from the security deposit or bond where, in the view of [the consent authority]:
    (i) a developer/builder/applicant has failed in his or her duty of care to the approved Plan; and
    (ii) this has placed surrounding environments at an unacceptable risk from soil erosion or stormwater pollution.

The amount of the forfeiture in these cases will be determined by a demerit system detailed as (Attachment 3)[2]

12. The environmental bond may be partially released during the construction phase:
    (i) upon the developer demonstrating diligent completion and operational readiness of works specified in the Plan; or
    (ii) at agreed rates corresponding to completion of development stages.

However, the residual bond amount must not be less than the cost of implementing the Plan over the remainder of the construction period.

13. Final release of the Environmental Bond must not occur before rehabilitation or landscaping is installed. Sometimes, maintaining temporary rehabilitation is acceptable providing *C*-factors are kept at less than 0.05 always (e.g. 70 percent grass cover, Attachment 1).

SWMP/ESCP Content

14. All Plans must accord with the guidelines presented in Chapter 2 of Managing Urban Stormwater – Soils & Construction, Landcom (2004). The principles of Total Catchment Management and ecologically sustainable development are strongly encouraged.

2. The monies collected from such forfeiture will be transferred to an environmental collections fund for financing strategies or rectifying damage or establishing devices onsite that improve the protection of the environment from soil erosion and stormwater pollution.

15. On smaller sites (where less than 2,500 square metres of land is disturbed), show:

(i) the following background information on the drawing(s):
- location of site boundaries and adjoining roads
- approximate grades and indications of direction(s) of fall
- approximate location of trees and other vegetation, showing items for removal or retention (consistent with any other plans attached to the application)
- location of site access, proposed roads and other impervious areas (e.g. parking areas and site facilities)
- existing and proposed drainage patterns with stormwater discharge points
- north point and scale.

(ii) how the various soil conservation measures will be carried out on site on a separate commentary, including:
- timing of works
- locations of lands where a protective ground cover will, as far as is practicable, be maintained
- access protection measures
- nature and extent of earthworks, including the amount of any cut and fill
- where applicable, the diversion of runoff from upslope lands around the disturbed areas
- location of all soil and other material stockpiles including topsoil storage, protection and reuse methodology
- location and type of proposed erosion and sediment control measures
- site rehabilitation proposals, including schedules
- frequency and nature of any maintenance program
- other site-specific soil or water conservation structures.

16. On larger sites (where more than 2,500 square metres of land are disturbed), identify all items listed in clause 15, above, as well as:

(i) the following information:
- the location of lots, public open space, stormwater drainage systems, schools, shopping/community centres
- the location of land designated or zoned for special uses
- existing site contours;

(ii) the location and general diagrammatic representations of all necessary:
- erosion and sediment control BMPs;

(iii) location and engineering details with supporting design calculations for all necessary:
- sediment basins; and

(iv) location and basic details of any other facilities proposed to be included as part of the development or works, such as:
- constructed wetlands

- gross pollutant traps
- trash racks or trash collection/separator units.

Detailed design criteria for these latter facilities should be sourced from other manuals/reports and are not an integral part of a construction phase *SWMP*. Usually they are considered as a separate function of the development approval process.

17. Specify the scale, type, operation and maintenance of all soil and water management devices in the soil and water management program. Include maps and/or specifications of measures proposed to control soil erosion and pollution by sediment.

Access and Roads

18. Vehicular access must be confined to approved areas. Where practicable, access must be stabilised and confined to one location.

19. Runoff from access surfaces must be drained into a nearby sediment-trapping device before leaving the site. Where appropriate, devices to remove soil materials from vehicles must be placed at site exit locations.

20. On subdivisions, priority must be given to road and road shoulder stabilisation based on erosion hazards. Where circumstances preclude the sealing of road shoulders and/or the construction of kerbs and guttering, and:

    (i) where grades permit grass shoulders (usually less than 5 percent), the shoulders and associated table drains must be topsoiled and turfed, having dimensions that simplify maintenance mowing; and

    (ii) where grades do not permit grass shoulders (generally more than 5 percent), the shoulders and associated table drains must be stabilised with appropriate erosion control measures (e.g. jute mesh and bitumen, cross drains, erosion matting, etc.) and revegetated.

21. Where practical on subdivisions, newly sealed hardstand areas must be swept thoroughly after sealing/surfacing to prevent excess aggregate or gravel entering street drains.

Clearing Vegetation

22. Nothing in this Code releases any person, proponent, council or authority from their obligations under the Native Vegetation Conservation Act, 1997. Further, approval given for clearing does not exempt anyone from requirements to:
    - obtain additional approval as might be required by other government agencies
    - meet the requirements of other legislation.

23. Site clearing for ground survey, geotechnical investigation or other purposes can be undertaken without development consent or approval, provided the work:

- is consistent with the Council's Tree Preservation Order and/or policy
- is undertaken so that the ground surface is not disturbed and at least 150 mm stubble remains on the surface
- is to provide site access with a minimum number of corridors
- is on land that is not subject to SEPP 14 (Coastal Wetlands), SEPP 19 (Bushland in Urban Areas), SEPP 26 (Littoral Rainforests), or SEPP 44 (Koala Habitat Protection)
- is on land that is not subject to the Native Vegetation Conservation Act, 1997 (see section 9 of the Act)
- only involves clearing that is excluded from the operation of the Native Vegetation Conservation Act, 1997 (see section 12 and Schedule 4 of the Act)
- involves erection of a fence within 1 metre of the boundary of lands owned or occupied by different persons
- involves maintenance of services and utilities by [the consent authority] or public authorities
- involves the destruction of weeds declared under provisions of the Local Government Act, 1993, or
- involves removal of trees in conformity with AS 2870.2-1996 for specific sites.

24. Consent is not required for clearing where that work is carried out following a notice issued for excess vegetation and/or noxious weeds under the Noxious Weeds Act, 1993 or the Local Government Act, 1993.

25. Clearing for the erection of a building for which development consent is not required must:

    (i) be accordance to [the consent authority's] LEP, Tree Preservation Policy and SEPPs 14, 19, 26, and 44 and the Native Vegetation Conservation Act, 1997; and

    (ii) be limited to land within 3 metres of the outermost projection of a building (or other structure), a permanent driveway, access way, or car park. The distance required can be varied to accord with AS 2870-1996 (Australian Standard: Residential Slabs and Footings – Construction) on reactive soils.

26. The positive role of vegetation in protecting the ground surface from erosion must be used minimising the removal or disturbance of trees, shrubs and ground covers.

27. Where other studies, reports or consent conditions have identified specific requirements to be addressed in environmentally sensitive areas identified by [the consent authority], then *SWMP*s shall:

    (i) show how appropriate measures will be taken to ensure that the activity does not unnecessarily affect any vegetation or trees of significance unnecessarily, including any process of lopping, removal, undermining, filling around or otherwise injuring them;

(ii) be prepared by a suitably qualified person as approved by [the consent authority]; and

(iii) be submitted to the [the consent authority] for approval.

28. On building sites:

(i) the footpath or nature strip must not be disturbed by construction activities other than where shown on the Plan for:
- access to the site
- installation of services
- other works specifically approved by [the consent authority]; and

(ii) removal and disturbance of vegetation must be confined to:
- the approved building envelope area and/or permanent access ways
- areas within 3 metres of the outermost projection of approved works and storage areas (or as required by other authorities).

Retained vegetation must be protected by a suitable barrier.

29. For subdivisional work:

(i) clearing for works must be limited to 5 (preferably 2) metres from the edge of any essential construction activity as shown on the engineering plans;

(ii) where practicable to do so, development must be phased, with clearing undertaken only with the development of each stage; and

(iii) understorey ground cover vegetation may be slashed, except in areas shown on the plan, providing ground surface disturbance is minimised and a rubber-tyred vehicle is used.

30. All reasonable care must be taken to protect other vegetation from damage during construction. This might involve:
- clearly marking trees to remain
- avoiding compaction of ground within the drip line of trees to remain
- clearly delineating the area of disturbance and keeping all vehicles, building materials and refuse within that area
- limiting the number of access points to the site
- clearly restricting access to "no go" areas.

31. No vegetation will be removed before approval by [the consent authority] to start work on any stage and not before the approved sediment control measures are in place.

32. Vegetation can be removed either without consent or to accord with approved plans for the purposes detailed in clause 23.

33. Where practical for subdivision and infrastructure works, vegetative debris must be salvaged either as logs or as woodchip for later reuse to control erosion or to

rehabilitate the site. Non salvageable materials, such as stumps and roots, can be removed.

Site Works

34. Site disturbance must not be undertaken before the issue of appropriate approvals.

35. Where works do not require approval, they can be undertaken provided they are in accordance with clause 5.

36. Where practicable, schedule the construction program to minimise the potential for soil loss so that the time from the beginning of land disturbance activities to rehabilitation is less than six months. Further, on lands with a high erosion hazard:

    (i) attempt to confine land disturbance to those times of the year when the rainfall erosivity is low; or

    (ii) show special measures on the Plan to address the high erosion hazard.

37. Site excavation must be designed and located with an aim to minimise cut and fill requirements.

38. Runoff and erosion controls must be installed before clearing and must include:

    (i) diversion of upslope runoff around cleared and/or disturbed areas or areas to be cleared and/or disturbed, providing that:
    - such diverted water will not cause erosion
    - the upslope catchment area is more than 2,000 square metres
    - waters are diverted to a legal discharge point;

    (ii) sediment control fences or other measures at the downslope perimeter of cleared and/or disturbed areas to prevent unwanted sediment and other debris escaping from the land; and

    (iii) maintenance of all erosion control measures at operational capacity until the land is effectively rehabilitated.

39. On sites where more than 1,000 square metres are to be disturbed, runoff and erosion controls must also include:

    (i) protection of areas to remain undisturbed through the erection of barrier fencing; and

    (ii) measures to restrict slope length to 80 metres unless other surface stabilising compensatory measures are applied.

40. Where possible, topsoil must be stripped only from those areas designated on the approved Plan and must be stockpiled for later use in rehabilitation and landscaping.

41. Stockpiles (topsoil, spoil, subsoil, sand, or otherwise) must be:

    (i) located at least 2 metres from any hazard areas, including surfaces with grades

greater than 15 percent, zones of concentrated flow, driveways, footpaths, nature strips, kerb line gutters, swales or standing vegetation;

(ii) protected from upslope stormwater surface flows;

(iii) provided with sediment filters downslope; and

(iv) provided with a protective cover that reduces the *C*-factor (Attachment 1) on bare surface areas to 0.15 or less where they are unlikely to be worked for more than 20 working days.

42. For subdivisional and infrastructure works, fill batters should be located to avoid established trees. Where this is not possible, advice from a tree surgeon or [the consent authority] should be obtained to minimise damage to affected tree(s). Where retention is not practicable, the affected tree(s) must be removed to maintain slope stability.

43. For infrastructure works trenches must be backfilled, compacted to 95 percent standard compaction, and capped with topsoil up to the adjoining ground level. The ground then must be turfed or sown with an approved seed and fertiliser mix.

44. Excess soil may be retained onsite provided the stockpile area is prepared by stripping topsoil from beneath the fill site and respreading it later over affected areas.

45. Trails and tracks for control of bushfires may be constructed and maintained providing they comply with:
    - the appropriate council bushfire prevention and control policy
    - the DIPNR's Guidelines for fire trail construction and maintenance
    - Section 41A of the Bush Fires Act, 1949.

46. Lands must be rehabilitated at the completion of all maintenance works where ground disturbance has occurred following clause 69.

47. All sediment control measures must be maintained at, or above their design capacity.

48. Where more than 2,500 square metres of land are disturbed, a self-auditing program must be developed for the site. A site inspection using a Log Book or Inspection Test Plan (ITP) must be undertaken by the site supervisor:
    - at least each week
    - immediately before site closure
    - immediately following rainfall events that cause runoff.

    The ITP can take the form of a checklist, completed by simple tick and brief comment entries.

49. The self-audit must be undertaken systematically onsite (e.g. walking anticlockwise from the main entrance) and recording:
    - installation/removal of any BMPs
    - the condition of each BMP employed, noting whether it is likely to continue in an effective condition until the next self-audit

- circumstances contributing to damage to any BMPs, accidental or otherwise
- storage capacity available in pollution control structures, including:
  - waste receptacles and portable toilets
  - trash racks
  - sediment barriers and traps
  - gross pollutant traps
  - wetlands/water quality control ponds
- time, date, volume and type of any additional flocculants
- the volumes of sediment removed from sediment retention systems, where applicable, and the site where sediment is disposed
- maintenance requirements (if any) for each BMP
- circumstances contributing to the damage to BMPs
- repairs affected on erosion and pollution control devices.

50. Signed, completed logbooks or ITPs must be available onsite and available for council officers, officers of the NSW DEC or any other bona fide person who might seek to review them (Attachments 3 and 4).

51. Irregularities noted by such bona fide persons must be dealt with immediately. If there is a breach or infringement of conditions, action will be taken consistent with the nature and seriousness of the breach or infringement. Actions taken by council (Attachment 5) can include:
    - issue of a "Stop Work Notice"
    - recording of demerit points that can result in forfeiture of part or all of the Environmental Bond
    - a fine under provisions of the Protection of the Environment Operations Act, 1997 (Attachment 5)
    - notice to comply pending reinspection of the site.

Stormwater Control

52. When building roof structures are in place, roof water is to be managed in a manner that reduces the likelihood of erosion. The stormwater system must prevent sediment from being eroded from the site and deposited downstream. The roof water system must be functional before roof runoff begins.

Pollution Control

This section applies only to sites where a *SWMP* is required (clause 2) or where, in [the consent authority's] view, the lands have a very high pollution hazard.

53. All pollution control measures and facilities must be installed and stabilised before other site earthworks or measures are commenced including stormwater diversion facilities.

54. Sediment basin(s) must be constructed where the calculated total annual soil loss from the disturbed lands is more than 150 cubic metres. Where the calculated basin size is less than 150 cubic metres, other erosion and sediment control devices can be installed instead.

55. Where sediment basin are required, construct these upstream of any wet ponds or receiving waters and, preferably, off-line.

56. A marker must be placed within each sediment retention basin to show the level above which the design capacity occurs. Advice about whether the basin is intended to be temporary or permanent must be provided by the proponent.

57. Where sediment retention basins are required, they must be designed to treat the design rainfall event sediment-laden stormwater emanating from the site during the subdivision works. They must remain in place at least until the developer has fulfilled all conditions of development consent. [The consent authority] can take over responsibility for the basin(s) or, alternatively, request the developer remove them after all compliance with all relevant consent conditions.

58. Where eroding soils contain more than 10 percent of dispersible fines:

    (i) all waters captured in sediment basins must be treated with an approved flocculating agent. This treatment should ensure that discharges from such basins contain no more than 50 milligrams per litre of non filtrable residues or as specified in [the consent authority's] Stormwater Management Plan. Following settlement of soil materials, the structure must be pumped out using a floating skimmer collection device. [The consent authority] might consider approval of alternative options for flocculation or stored water removal where appropriate technical documentation is provided;

    (ii) sediment retention basins must be maintained at a low water level in readiness for treatment and discharge of further runoff. All sediment captured in basins must be treated and discharged within two to 20 days of the cessation of a rainfall event depending on the appropriate design criteria; and

    (iii) a minimum stockpile of flocculating agents must be retained onsite to provide for at least three complete treatments. It must be stored in a secure undercover location.

59. All sediment control structures described on a *SWMP* or in this Code must be operated and maintained in an effective operational condition by following good engineering practice. A maintenance program must be established that should ensure that accumulated sediment does not impinge on the capacity of the settling zone up to the design storm event. Solid materials removed from sediment retention basins must be disposed of in a way that does not pollute waters.

60. Suitable all-weather access must be provided to all wetlands, sediment basins, detention basins and trash racks to ensure clearing and maintenance programs will not be compromised by inclement conditions.

61. Where practicable to do so, surface waters from any undisturbed lands must be diverted away from pollution control equipment to prevent contamination of clean runoff.

62. Appropriate measures must be provided to ensure that works do not cause flooding, erosion or scour. Such works include diversion and drainage structures, spillways, weirs, pipes and channels.

63. Chemical products, including petroleum, must be prevented from entering the stormwater system or contaminating the soil. Where necessary, impervious bunds must be constructed around all storage areas with an enclosed volume large enough to contain 110 percent of the volume held in the largest tank.

64. Adequate trade waste and litterbins must be provided onsite and serviced regularly.

65. Concrete wastes or washings from concrete mixers must not be deposited in any location where those wastes or washings can flow, or can be washed into any areas of retained vegetation or receiving waters.

Rehabilitation and Landscaping

66. All ground disturbed because of the development must be progressively stabilised and rehabilitated so that it no longer acts as a source of sediment.

67. Other than on the footpath or nature strip, additional ground disturbance for final rehabilitation work may be undertaken without consent, if such work satisfies all other requirements of this Code.

68. Reduce the *C*-factor to less than 0.15 (e.g. greater than 50 percent grass cover, Attachment 1) on all lands, stockpiles and other exposed materials scheduled to remain unattended for more than 20 working days.

69. Schedule the final rehabilitation or landscaping program so that less than 20 working days will elapse from final land shaping to permanent rehabilitation. Sometimes, maintaining temporary rehabilitation is acceptable providing the *C*-factor is less than 0.05 (e.g. greater than 70 percent grass cover, Attachment 1). Here, rehabilitation is defined two ways, depending on rainfall erosivity:

    (i) In periods of expected low rainfall erosivity during the rehabilitation period, achieve a *C*-factor of 0.15 and keep it there by vegetation, paving, armouring, etc.[3]

3. Attachment 1 shows that *C*-factors of 0.15 can be achieved in various ways. For example:
    (i) A *C*-factor of 0.15 can be achieved with about 30 percent ground cover where the soils have not been disturbed recently and 50 percent cover where they have been disturbed (as at most construction sites);
    (ii) A *C*-factor of 0.05 can be achieved with about 55 percent and 70 percent cover on undisturbed and disturbed soils respectively.

"Low" rainfall erosivity is defined as a month with an erosivity of less than 100. The erosivity for a month at a location is calculated by:

R-factor x percentage of annual EI occurring per month

(ii) In periods of moderate to high rainfall, achieve a *C*-factor of less than 0.1 and set in motion a program that should ensure it will drop permanently by vegetation, paving, armouring, etc. to less that 0.05 within a further 60 days.

70. For building works, all landscaping must be installed following with the approved landscape or rehabilitation plan before occupation or use of the premises. All such works must be maintained in a stable and effective condition.

Attachment 1: *C*-factor

The cover factor, C, is the ratio of soil loss from land under specified plant or mulch conditions to the corresponding loss from cultivated, bare soil. It is different from the runoff coefficient used in the rational method. The most effective method of reducing the *C*-factor is maintenance, or formation of a good ground cover. The best practices (figure M1, Table M2) are those that reduce both the soil exposed to raindrop impact and the erosive effects of runoff. Additional information is presented in *Managing Urban Stormwater - Soils & Construction,* Landcom (2004).

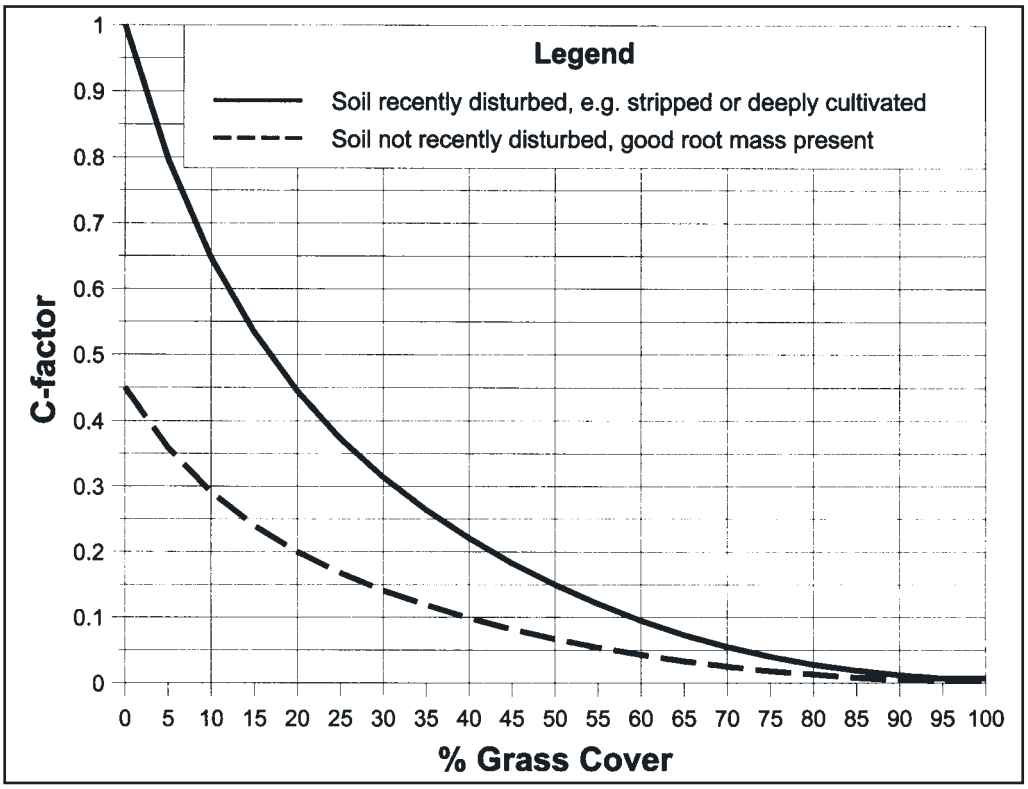


Figure M1 C-factors for established grass cover

Table M2 Soil Stabilization Control Matrix (adapted from various sources, including Meyer and Ports (1976), Israelson *et al*. (1980), Goldman *et al*. (1986), URS Greiner Woodward Clyde (1999) and the North American Green website).

Attachment 2: Environmental Bond

The applicant must lodge a security, deposit or other financial guarantee with [the consent authority] as an assurance that any erosion, sediment and pollution control strategy described in the Plan will be diligently established, implemented and maintained as specified by the approval.

Where the contractor is shown to fail to carry out any part of the approved Plan diligently, a part or all the bond monies might be forfeited and used for carrying out various strategies or rectifying any environmental damage that has occurred as a result. Bond monies will be applied specifically to rectification of problems arising from neglect.

Reimbursement of remaining bond monies will be based on "diligent performance" and "duty of care" indicators separate from any indicators that acceptable levels of erosion, sediment and pollution have been achieved (see Attachment 3). This is to provide incentives for a level of risk management that is sustainable in all conditions of weather and climate, no matter whether such conditions occur during the development covered by the particular Plan.

Attachment 3: Demerit Point System

This demerit system outlines the maximum number of points that can be deducted for any lack of care/diligence in application of a Plan. Funds so collected will be used only for rectification of problems arising from neglect.

A total of 100 points will be allocated for each Plan so that each point represents 1 percent of the total amount held in security. The following is a list of matters that can attract demerit points:

Issues attracting demerit points	Points lost	
	1st offence	2nd offence
failure to regularly complete or keep a Log Book or Inspection Test Plan (ITP)	10	20
failure to secure the site against erosion, sediment and pollution during work site absences satisfactorily	5 points/day for the first two days, thereafter 2 points per day	
failure to implement and maintain erosion, sediment and pollution control devices/structures/procedures satisfactorily at the optimum operating capability specified in the Plan	5	15
disturbance of soil surfaces beyond those specified on the Plan, including parking of work site vehicles in protected areas	5	10
unacceptable amounts of sediment carried to neighbouring road surfaces, gutters and kerbs, including that carried on the wheels of vehicles leaving the site	5	10

Development sites will be routinely checked against the demerit activities to determine any inadequacies in implementing the Plan. The following procedure will be used while carrying out the routine checks:

(a) If any problems or inadequacies are noted by the responsible government officer, 24 hours notice will be given to rectify them and a $750 or $1,500 on-the-spot fine may be issued under the Protection of the Environment Operations Act, 1997, for individuals or corporations respectively;

(b) If the problems or inadequacies are not rectified within 24 hours, "First Offence" loss of points will apply and/or a $750 or $1,500 fine can be imposed under the Protection of the Environment Operations Act, 1997, for individuals or corporations respectively;

(c) If at a subsequent site inspection, a similar offence occurs then "Second Offence" loss of points will apply and/or a $750 or $1,500 fine can be imposed under the Protection of the Environment Operations Act, 1997, for individuals or corporations respectively.

Attachment 4: Responsibilities for Council's Officers

During construction, Council officers will inspect and report on the condition and performance-readiness of any approved Plan strategies for the site. Inspections can occur at the same time as regular or unscheduled building inspections. In consultation with the site manager, officers will:

- check the Log Book and/or Inspection and Test Plan (ITP) for completeness and accuracy
- make notations that help assessment of the current erosion hazard and allow for independent review of this assessment
- record and witness compliance/non compliance with the approved Plan
- record demerit points according to council's directions (Attachment 3) for any deficiencies or breaches of the Plan
- record accumulated demerit points
- make recommendations for averting any immediate or potential erosion, sedimentation or other pollution arising, or likely to arise from the development activities at the site
- draw the attention of the site supervisor to notations, particularly those requiring remedial actions
- report instances of any discharges that are breaches or alleged breaches of the Protection of the Environment Operations Act, 1997
- act to the extent of delegations provided by council to issue breach or infringement notices where pollution discharges are recorded
- stamp, sign and date the Log Book or ITP and initial each notation.

During any inspection, information will be gathered and can be presented to council for possible inclusion in their "State of the Environment" reporting and as an indication of the appropriateness of council's engineering and planning practices.

All council reports on this matter will be made available for an independent audit to achieve the long-term goals established by State and National policies, including among others:

- Council Stormwater Management Plans
- Natural Resource Management Strategy
- National Water Quality Management Strategy
- Ecologically Sustainable Development Guidelines
- Green Cities – Australian Urban and Regional Development Review.

Attachment 5: Issue of Fines

Councils have authority to issue fines under provisions of the Protection of the Environment Operations Act, 1997

The principle matter of consideration when considering if a fine should be issued will be whether the standards embodied in *Managing Urban Stormwater: Soils & Construction,* Landcom (2004) have been adopted. A successful defence against prosecution will rest on an ability to produce evidence of:

- an appropriate *ESCP/SWMP (Plan)* approved by council, and
- diligent application of the measures outlined in the approved Plan, clearly recorded in a Log Book and, where appropriate, an ITP.

Developers should understand that approval of a Plan by council does not reduce the ultimate responsibility for pollution control from owners and managers. Nevertheless, the Plan does provide documentary evidence of the probable level of "diligence and duty of care" that should be exercised in attempting to control erosion of soil and pollution of sediment and, where appropriate, other materials. They should note, too, that multiple fines could be issued for the same offence if warnings are not heeded and/or deadlines are exceeded.

Councils seeking successful prosecutions should establish a process of natural justice that is fair to site owners and managers. Consequently, they have a responsibility to ensure that:

(i) the approval processes applied to a Plan include scrutiny of its compliance with the standards and guidelines embodied in *Managing Urban Stormwater – Soils & Construction,* Landcom (2004), and

(ii) the applicant is advised of any concerns council may hold for the Plan not meeting these standards or any other doubts about its likely effectiveness in controlling soil erosion and stormwater pollution.

Councils using the legislation effectively will make entries in the site Log Book/ITP and any council reports that:

- clearly establish that a breach has occurred or is occurring
- establish that clear deadlines for rectification have been set
- provide evidence that the site manager has been properly advised of the deadline
- includes:
  - records of inspections and warnings issued
  - records of unheeded warnings and deadlines.

Further, they will be consistent in their application of procedures.

Class	Type	Suitable for Vegetation Type [1]	Design Life (months)	Use in Concentrated Flow [2]	Availability (days) [3]	Relative Cost Bracket [4]	Residual Impact [5]	*C* -factor [6] <33%, <6m	*C* -factor <33%, 6-15m	*C* -factor <33%, >15m	*C* -factor 33-50%, <6m	*C* -factor 33-50%, 6-15m	*C* -factor 33-50%, >15m
BIODEGRADABLE MULCHES [7]													
Straw (anchored)	4.5 tonnes per hectare	Grass	1 to 6	No	< 5days	Low	Moderate	0.17	0.17	0.20	0.20	0.20	0.20
Wood Chip	16 tonnes per hectare	Grass/Shrubs	1 to 6	No	< 5days	Low	Moderate	0.08	0.08	0.08	No data		
Wood Chip	27 tonnes per hectare	Shrubs	1 to 6	No	< 5days	Low	Moderate	0.05	0.05	0.05	No data		
Wood Chip	56 tonnes per hectare	Shrubs	1 to 6	No	< 5days	Low	Moderate	0.02	0.02	0.02	0.02	0.02	0.02
Hydromulching	1.5 tonnes mulch + 300 litres binder per hectare	Grass	1 to 3	No	< 5days	Low	Low	0.00	0.03	0.07	0.03	0.06	0.10
Bonded Fibre	5 tonnes fibre per hectare	Grass	1 to 6	No	< 5days	Low	Moderate	0.00	0.03	0.07	0.03	0.06	0.10
ROLLED EROSION CONTROL PRODUCTS (RECPs) [7]													
Biodegradable	Jute mesh	Grass	6 to 12	Yes	< 5days	Low	Moderate	0.10	0.20	0.40	0.20	0.40	0.60
	Coconut fibre mesh	Grass	6 to 12	Yes	< 5days	Low	Moderate	0.10	0.20	0.40	0.20	0.40	0.60
	Curled wood fibre	Grass	6 to 12	Yes	< 5days	Medium	Moderate	0.01	0.05	0.10	0.10	0.15	0.20
	Jute matting (~350 gsm)	Grass	6 to 12	Yes	< 5days	Medium	Moderate	0.00	0.03	0.07	0.03	0.06	0.10
	Jute matting (~600 gsm)	Shrubs	6 to 12	Yes	< 5days	Medium	Moderate	0.00	0.03	0.07	0.03	0.06	0.10
	Coconut fibre matting (~450 gsm)	Grass	6 to 12	Yes	< 5days	Medium	Moderate	0.00	0.03	0.07	0.03	0.06	0.10
	Coconut fibre matting (~900 gsm)	Shrubs	6 to 12	Yes	< 5days	Medium	Moderate	0.00	0.03	0.07	0.03	0.06	0.10
Photodegradable	Mesh (< 5 mm openings)	Grass	1 to 6	Yes	< 5days	Low	Moderate	0.01	0.05	0.10	0.10	0.15	0.20
Non Biodegradable	Plastic fibres with netting	Grass	> 12	Yes	< 5days	High	High	0.00	0.05	0.10	0.03	0.05	0.10
	Composite with biodegradable	Grass/Shrubs	> 12	Yes	< 5days	High	High	0.00	0.03	0.07	0.03	0.06	0.10
HYDRAULIC SOIL STABILISERS [7]													
	Polymers/Polyacrylamide (rate depends on type)	Grass	1 to 6	No	< 5days	Low	Low	0.01	0.05	0.10	0.10	No data	
	Bitumen emulsion (12,000 l/ha)	Grass	1 to 6	No	< 5days	Low	Low	0.01	0.05	0.10	0.10	No data	
TEMPORARY SEEDING													
	Annual	NA	6 to 12	No	< 5days	Low	Low	0.05	0.05	0.10	0.10	No data	
	Perennial	NA	> 12	No	< 5days	Low	Low to moderate	0.05	0.05	0.10	0.10	No data	
INSTANT TURF [7]													
	Kikuyu	Grass	> 12	Yes	< 5days	Medium	Low	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Reinforced turf (pregrown)	Grass	> 12	Yes	5 - 15 days	High	High	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Notes

1 Whether vegetation is required and its type if so, will affect the technique used. Biodegradable mulches, RECPs and hydraulic soil stabilisers can all be used on their own to provide short term protection. However, their effectiveness is less when used in isolation than when used with vegetative growth. Most techniques are used to help establish vegetative growth using sown grasses. Should the client specify shrubs (primarily planted as tubestocks), then thicker mulches, RECPs or biodegradable mulches should be used. Non biodegradable RECP's are used to reinforce grasses (turf) permanently. They are not suitable for use with individual shrubs. They can work synergistically with the established grass to increase its resistance to shear stress and, therefore, increase its resistance to erosion by concentrated flow.

2 Products might or might not be suitable for use in areas of concentrated flow. All products are suitable for sheet flow conditions, although some would be over designed in such cases.

3 Whether or not a product is readily available is critical to the selection process. Many RECP and hydraulic soil stabiliser techniques use products that might be "off the shelf" and available from several suppliers. Biodegradable mulches can be affected by seasonal variation, although they might also be available on site after initial clearing and grubbing. Temporary seeding might also be seasonal.

4 For any given technique, cost can vary greatly depending on geographic location, size of project and installation requirements. In addition, costs can vary over time. Because of these factors, giving accurate installed costs is not possible. However, if a product is relatively inexpensive to purchase and install close to its point of manufacture, it will still be relatively inexpensive to purchase and install remote from it.

5 This criterion relates to the impact that a particular practice might have on construction activities once they are resumed on an area that was temporarily stabilised.

6 The performance of an erosion control technique is quantified by assigning it with a C-factor (Appendix A). The C-factor will vary from close to zero for full cover, to 1.0 for no cover on highly disturbed soils. The C-factor strongly affects the soil loss calculation (RUSLE) and users need to be careful in specifying its value, particularly when values <0.01 are quoted. Note that the C-factor does not apply to conentrated flow.

Values for the C-factor are given for various slopes gradients and lengths and show that it can change dramatically with them. The values given are compiled from existing data and from inference between products of a similar nature. They are given as a guide only and do not profess to be accurate in all respects. Overall, accurate C-factors are only available for manufactured products, primarily from the USA (RECP's in particular) where extensive independent testing has been undertaken. Unfortunately, very little data is available for the "lower cost" options such as biodegradable mulches, jute mesh and hydraulic soil stabilisers. Wherever possible, the manufactures should be contacted for their latest data on acceptable C-factors.

For the RECP's in particular, the C-factors given here are for the product as installed with no vegetation. Note however that lower C-factors can be expected if vegetation is promoted with many RECP's. Indeed, non biodegradable RECP's are designed to work synergistically with turf and must be used with it.

7 For information on trade names and suppliers of these products, please phone the office of Australasian Chapter of the International Erosion Control Association on 1800 354 322 or (+61 2) 4677 0901.

Table M2

APPENDIX N

N Glossary

Some of this material was drawn from Department of Main Roads (2002), Houghton and Charman (1986) and Morse (1999).

Aggregate – A soil aggregate is a unit of soil structure consisting of primary soil particles held together by cohesive forces or by secondary soil materials such as iron oxides, silica or organic matter. Aggregates can be natural, such as peds, or formed by tillage, such as crumbs and clods.

Alluvial plain – A landform with extremely low relief formed by the accumulation of alluvium from overbank stream flow over a considerable period. This accumulation might still be occurring (floodplain) or might have ceased (c.f. terrace).

Amelioration – Refers to efforts made to minimise adverse effects of an activity (e.g. road construction) after the event.

Apron – A floor or lining at either the inlet or outlet of a hydraulic structure such as a culvert to protect the waterway channel from erosion.

Australian Height Datum (AHD) – A level datum, uniform throughout Australia, based on an origin determined from observations of mean sea level at tide gauge stations, at more than 30 points along the Australian coastline.

Average Recurrence Interval (ARI) – The average or expected value of the period between exceedences of a given rainfall event or discharge.

Backwater – That part of a stream, the water level of which is kept above normal due to some controlling influence downstream.

Barrier – An impediment to surface water placed on or near a contour along the surface to be protected (slopes or channels). Barriers can also be used to divert surface water flow to a stabilised outlet. Various materials can be used depending upon the quantity and depth of water and local availability of materials. Common materials include brush, compacted earth, gravel, hay, rock, sand bags, silt fences and straw bales.

Basin – A hollow or depression within which water can be contained.

Batter – The sideslope of an embankment or cutting.

Batter chute – A temporary or permanent structure designed to convey concentrated storm runoff down a cut or fill embankment or over a change in grade without causing erosion.

Bed and bank – With reference to a watercourse or lake, means land over which the water of that watercourse or lake normally flows or that is normally covered by the water whether permanently or intermittently, but does not include land next to the bed or banks that are periodically covered by floodwaters (c.f. floodplain).

Bench (benching) – (1) A ledge cut or formed in the batter of a cutting or bank, to provide greater security against mass movement; (2) A ledge constructed in a batter or natural slope to segment the slope length to reduce the erosion potential.

Berm – Typically used in reference to slope barrier measures designed to break the continuity of slopes to reduce runoff velocities (c.f. barrier).

Best management practices (BMPs) – "Best management practices" (BMPs) are programs, systems or structures used to mitigate or prevent pollution of receiving waters. The word "best" is a misnomer because the success and effectiveness of a BMP can depend on many variables. Further, the effectiveness of any BMP can vary from day to day, being affected by such factors as climate, time, maintenance, etc.

Biodiversity – The number of species of vegetation and wildlife in a given habitat. Rainforests, which typically have many different plant and animal species, are said to be "high" in biodiversity.

Borrow Pit – An excavation outside the formation limits for obtaining fill.

Broadcast seeding – Any method of planting seed that scatters the seed in random pattern on the surface of the soil.

Buffer zone – Zone next to sensitive areas that are required for protecting streambanks from erosion. They provide habitats along stream corridors and treat overland flow before it enters the drainage network.

Bypass flow – That portion of the flow in a road or in a channel that is not collected by a gully inlet or field inlet and is redirected out of the system or to another inlet in the system.

Capillary water – Water drawn upwards from a free water surface in the ground into soil pores where it is held by surface tension.

Catch drain – A small channel constructed to intercept and divert runoff away from embankments, disturbed areas, and stockpiles.

Catchment area – That area determined by topographical or equivalent features, upon any part of which rain falling will contribute to the discharge of the stream at the point under consideration.

Causeway – A raised carriageway across wet or low areas or across tidal water.

Channel – (1) The bed of a stream or river; (2) A course or passage through which something can move or be directed.

Channel freeboard – Vertical distance between the design water surface elevation in an open channel and the level of the top of the channel bank.

Channel lining – Material placed on the surface of a channel or chute to protect it from erosion. Materials include grass and turf, reinforced grass, erosion control mats, rock lining, rock mattress, cellular confinement and impervious liners.

Channel stabilisation – Materials used to stabilise the channel surface. Examples include soil retention blankets (with appropriate seeding mixture) for nonstructural cover, and concrete or riprap (rock) for structural cover.

Check dam – Check dams are typically used in channels conveying concentrated flows to control flow velocity and minor gully erosion. They can be constructed from semipervious or impervious materials such as medium-size rock or sand and gravel filled bags.

Chute – Used to convey water down slopes and are constructed with materials suited to the expected life of the chute (e.g. concrete).

Clay – A natural earthy material possessing plastic properties and consisting of particles finer than 0.002 mm. Generally, it includes the most chemically active mineral part of a soil. Many of the important physical and chemical properties of a soil depend on the type and quantity of the clay portion. Three broad clay types are recognised, montmorillonite, kaolinite and illite. When used as a soil texture group, such soils contain at least 35 percent clay and less than 40 percent silt (c.f. silt and sand).

Clay loam – A loam with clayey materials predominating.

Clearing – The removal of vegetation, structures or other objects.

Coagulation – Two broad processes can be considered to help reduce suspended solids loads where a significant proportion of these are dispersible fines: coagulation and flocculation. Coagulating agents destabilise colloidal suspensions by neutralising the surface charges allowing settlement; flocculating agents cause the colloidal particles to clump into larger units or "flocs" that can either settle in a reasonable time or be filtered.

Coefficient of runoff – Dimensionless coefficient used in the Rational Method (Pilgrim, 1998) for the calculation of peak runoff discharge.

Coefficient of runoff (volumetric) – The ratio of how much water runs off to the amount that falls in a catchment area.

Cofferdam – A temporary enclosure formed to exclude water from an area in which construction is to take place. Cofferdams can take a variety of forms and are constructed from materials such as driven sheet piling, rock, earth or concrete.

Cohesive soil – A soil whose relevant behaviour characteristics are derived largely or entirely from the cohesive bonds associated with the fine fraction.

Concentrated flow – Water, usually storm runoff, flowing in a confined feature such as a channel, ditch, swale, river, etc.

Consistence – refers to the strength of cohesion and adhesion in soil. Strength is determined by the force just sufficient to break or deform a 20-mm diameter piece of soil when a compressive shearing force is applied between thumb and forefinger:

Loose – No force required

Very weak	–	Very small force, almost nil
Weak	–	Small but significant force
Firm	–	Moderate or firm force
Very firm	–	Strong force but within the power of thumb and forefinger
Strong	–	Beyond power of thumb and forefinger. Crushes underfoot on a hard flat surface with small force
Very strong	–	Crushes underfoot on a hard flat surface with full body weight applied slowly
Rigid	–	Cannot be crushed underfoot by full body weight applied slowly

Controlled activity – is defined in the Water Management Act (2000) (Appendix I) as:

(a) the erection of a building or the carrying out of a work (within the meaning of the Environmental Planning and Assessment Act, 1979), or

(b) the removal of material (whether or not extractive material) or vegetation from land, whether by way of excavation or otherwise, or

(c) the deposition of material (whether or not extractive material) on land, whether by way of landfill operations or otherwise, or

(d) the carrying out of any other activity that affects the quantity or flow of water in a water source.

Cover crop – Plants, particularly cereals, grown mainly to protect the soil temporarily during or before the establishment of more protective plant cover.

Cover factor – In the Revised Universal Soil Loss Equation (Appendix A), the cover factor, C, is the ratio of soil loss from land under specified crop or mulch conditions to the corresponding loss from continuously tilled, bare soil. The *C*-factor is different from the runoff coefficient used in hydrologic calculations. The most effective method of reducing the *C*-factor is maintenance, or formation of a good ground cover such as outlined in Chapter 7.

Crest – The summit or top edge.

Critical depth – The depth occurring in a channel or conduit at a condition of flow such that the specific energy is a minimum for the particular flow.

Cross drainage – A system of pipes or culverts that convey storm flows transversely across or under a roadway.

Crossfall – The slope, at right angles to the alignment, of the surface of any part of a carriageway.

Culvert – One or more adjacent pipes or enclosed channels for conveying a watercourse or stream below formation level.

Dam – A barrier or embankment that confines water.

Detention basin (retention/retarding basin) – A storage pond, basin or tank used to reduce and attenuate the peak discharge within a drainage system. In Australia, detention basins can have an outlet pipe and/or a spillway and the term is interchangeable with retention basin. It is also interchangeable with sedimentation basin when sediment control is the main purpose of the basin.

Dispersible soils – Dispersible soils (Appendix E) are structurally unstable in water and readily split into their constituent fine particles resulting in turbid water that never seems to clear. They can stay in suspension for very long periods, mainly because of negative electrical charges on their surfaces that cause them to repel each other.

Dispersibility relates mainly to particles finer than 0.005 mm diameter (all the clay and the fine silt). Those particles derived from kaolinite clay have relatively few negative charges on their surfaces; those from illite clay have moderate amounts while those from montmorillonite clay have many charges. The only other soil materials likely to carry significant surface charges are colloidal organic matter, some mineral oxides, and silicates of calcium, iron and aluminium.

So, different soils might have different levels of dispersibility depending on their composition and particle size analysis. Those regarded as significantly dispersible are defined as those where more than 10 percent of the soil fraction are affected. That is, where the percentage of clay (materials < 0.002 mm) plus half the silt (roughly those materials between 0.002 and 0.005 mm) multiplied by the dispersion percentage (Ritchie, 1963) is equal to or greater than 10. See Emerson Aggregate Test.

Diversion bank – An earth bank constructed across a slope for intercepting and diverting water. Typically constructed at the upper edges of cut slopes to collect water from nearby properties and divert it around the cut.

Drainage – Natural or artificial means of intercepting and removing surface or subsurface water (usually by gravity).

Drainage catchment – The area of land contributing stormwater runoff to the point under consideration.

Drainage system – A system of gully inlets, pipes, overland flow paths, open channels, culverts and detention basins used to convey runoff to its receiving waters.

Drop-down structure – A hydraulic structure for allowing water to fall to a lower level. It generally includes an energy dissipater (c.f. energy dissipater).

Due diligence – Due diligence is the only real defence to prosecution proceedings for environmental mishaps. It is based on a systematic approach to setting environmental performance standards. Usually, due diligence can be demonstrated only through a three-step environmental management program that ensures:

- the sites' constraints are properly assessed
- BMPs are identified with design criteria that address those constraints
- an adequate safeguard or maintenance program is developed.

Ecologically sustainable development (ESD) – ESD (ESD Steering Committee, 1992) uses, conserves and enhances the community's resources so that ecological processes, on which life depends, are maintained and the total quality of life now and in the future can be increased. It can be broken into four objectives:

- sustainable quality of life
- biodiversity conservation
- pollution minimisation
- resource conservation.

Ecology – The interrelationships between plants, animals and humans that compete and depend on each other for existence in the physical environment.

Electrical conductivity – The electrical conductivities (EC) of 1:5 soil/water suspensions are used to detect the presence of soluble salts and, from this, suggest the general salinity level. The main soluble salts likely to be present are sodium, calcium and magnesium, which might be chlorides, sulfates or carbonates. The standard unit of electrical conductivity in soil is decisiemens per metre (dS/m).

Where the levels of soluble salts rise in soil, they can reduce the vigour or kill existing vegetation increasing the erosion hazards and, in extreme cases, promote the destruction of building works and roads. Rehabilitation of saline soil requires specialised techniques, described above in Chapter 7.

Conventionally, the effect of salinity on plants is described in terms of the electrical conductivity of a saturated extract (ECe). Multiplier factors are necessary to convert the EC 1:5 values to ECe values (Hazelton and Murphy, 1992). Note that normal EC meters give results in parts per million (or mg/kg or mg/l). To convert these to decisiemens per metre, divide the results by 640.

EMC – Event Mean Concentration is defined as pollutant load washed off by a storm event divided by the runoff volume.

Emerson Aggregate Test – The Emerson Aggregate Test (EAT) (Emerson, 1967) is an eight-class classification describing the behaviour of air-dried soil aggregates when placed in distilled water. Specifically, it describes whether the aggregates slake or disperse and is recommended as a "backup" test to dispersion percentage.

While both the Emerson and Dispersion Percentage tests show whether soil will disperse, the Emerson test also provides insight to the conditions under which they will disperse. For example, some soil aggregates disperse after being gently placed in water, while others require remoulding or shaking in a 1:5 aggregate water suspension. In the field, soils that require remoulding to disperse are not usually a major problem unless found in positions where they might be pulverised when wet, such as on access roads.

Further, the Emerson tests shows whether soil slake, whereas the Dispersion Percentage test does not. Soils that slake break down in water but do not go into suspension as do

dispersible soil, i.e. the particles settle relatively quickly. Soils that slake are much more erodible than those that do not and require special attention in the erosion control program.

Energy dissipater – Any means to reduce the total energy of flowing water especially high velocity flows. In stormwater design, they are usually mechanisms that reduce velocity before, or at, discharge from an outfall to prevent erosion. Materials used include gabions, concrete splash pads, drop structures, riprap, and boulders.

Environmental Management Plan (EMP) (construction) – Prepared by the construction contractor, considering the management of environmental impacts of activities in a given road project during the construction period. It identifies risks to the environment for the project and the environmental requirements contained within the contract documentation and outlines key strategies for managing these risks and minimising undesirable environmental impacts.

Environmental Management Plan (EMP) (maintenance) – Prepared by the maintenance contractor. It considers the management of environmental impacts of activities in a given maintenance project as well as environmental requirements contained within the contract documentation. It focuses on the minimisation of adverse effects (and the management of these effects) on the environment by maintenance activities required.

Environmental Management Plan (EMP) (planning) – Sets out the overall requirements, outcomes and performance indicators for the design, construction and maintenance of a road project.

Environmental monitoring – Includes activities that gather and evaluate information used for the assessment of environmental performance.

Erosion – (1) The wearing away of the land surface by moving water, wind, ice or other geological agents, including such processes as gravitational creep; (2) Detachment and movement of soil or rock fragments by water, wind, ice or gravity (i.e. accelerated, geological, gully, natural, rill, sheet, splash, or impact, etc.).

Erosion control – Includes the protection of soil from dislocation by water, wind or other agents.

Erosion and Sediment Control Plan – An Erosion and Sediment Control Plan is a component of a Soil and Water Management Plan, but only addresses erosion and sediment control during a construction phase where 250 to 2,500 square metres will be disturbed (Chapter 2). It does not address ongoing or permanent control of pollutants (c.f. Soil and Water Management Plan).

Erosion control practice factor – In the Revised Universal Soil Loss Equation (Appendix A), the erosion control practice factor, P, is the ratio of soil loss with a nominated surface condition ploughed up and down the slope. It is reduced by practices that reduce both the velocity of runoff and the tendency of runoff to flow directly downhill. At construction sites, it reflects the roughening or smoothing of the soil surface by machinery.

Estuary – Under the Water Management Act (2000) (Appendix I), estuary means:

- any part of a river whose level is periodically or intermittently affected by coastal tides, or
- any lake or other partially enclosed body of water that is periodically or intermittently open to the sea, or
- anything declared by the regulations to be an estuary, but does not include anything declared by the regulations not to be an estuary.

Extreme flood – The rare flood event for which the performance of a detention basin or similar structure should be checked to assess the economic and social risk that could be associated with overtopping or failure of that structure.

Filter fabric – See geofabric.

Filter material – Granular material with the grading selected so that it will allow water to pass through it, while retarding the movement of soil particles.

Filter strip – Typically a long, relatively narrow area of undisturbed or planted vegetation used to retard or filter sediment for the protection of watercourses, drainage basins, diversions, reservoirs, or nearby properties.

Flocculant – A chemical agent used to enhance the flocculation process (c.f. flocculation).

Flocculation – Two broad processes can be considered to help reduce suspended solids loads where a significant proportion of these are dispersible fines: coagulation and flocculation. Flocculating agents cause the colloidal particles to clump into larger units or "flocs" that can either settle in a reasonable time or be filtered; coagulating agents destabilise colloidal suspensions by neutralising the surface charges allowing settlement. Flocculation occurs naturally under certain conditions, such as are found in estuaries, saline springs and wetlands; it also occurs in sediment retention basins through human intervention. The most common flocculent used in sediment retention basins in Australia is gypsum, usually applied at a rate of 30 kg per 100 cubic metres of water. It can cause flocculation in most sediment retention basins within 36 to 48 hours.

Flood boundary line – A line defining the edge of the area submerged at the height of a flood. Usually related to a given recurrence interval.

Floodplain – The relatively flat area adjoining the channel of a natural stream that has been or can be inundated with flood waters.

Floodway – Longitudinal depression in a carriageway specially constructed to allow the passage of floodwater across it without damage.

Fraction impervious – That part of a catchment that is impervious, expressed as a decimal or percentage.

Freeboard – The height between a given water level and the underside of a bridge, top of a channel or embankment, or floor of a building to give a factor of safety against calculated design flood levels.

Gabion – A rectangular wire mesh cage filled with rock, brick or similar hard material. The components are usually assembled on site, securely tied together, and used in the construction of retaining walls and anti-erosion structures (c.f. Reno mattress).

Geofabric – (filter fabric, geotextile) – (1) A synthetic fabric, woven or non woven, used for various purposes including:

- embankment reinforcing and stabilization (including in channels)
- seepage control
- pollution containment
- providing a filter layer between dissimilar materials
- as a strain alleviating membrane.

Grading – Any stripping, cutting, filling, stockpiling, or combination of these that modify the land surface.

Grassed swale – Grassed swales are long, shallow, linear water conveyance structures, constructed on soils of significant infiltration capability. Sedimentation can greatly reduce their infiltration capacities and unless they are regularly renovated they become grassed waterways. Their water conveyance capabilities should be protected by selection of suitable non erodible grasses (Table 5.1). Normally, they outlet to the natural drainage system, either directly or indirectly (c.f. waterway).

Ground cover – Any vegetation producing a mat on or just above the soil surface. In forests, this maybe formed by low-growing shrubs, vines, and herbaceous plants under the trees.

Groundwater – The water below the watertable (c.f. watertable).

Grubbing – The removal of roots and stumps below ground level.

Headwater – The height of water above the invert of a culvert measured at the inlet of the culvert.

Hydraulic design – In relation to stormwater drainage, this involves the determination of velocities, the hydraulic grade line and water levels as storm runoff passes through the drainage system.

Hydrograph – A graph of stream height or volume rate of flow past a specific point against time.

Hydrology – Prediction of runoff based on an assessment of rainfall.

Hydromulching – A mechanical method of applying seed, lime, fertiliser and mulch in a water slurry to which has been added soil binders for soil stabilisation (see also soil binder).

Impermeable – Cannot be penetrated by a fluid such as air or water, but commonly refers to water penetration.

Impervious area – The area within a drainage catchment that is impermeable.

Infiltration – The slow movement of water into or through soils or drainage media.

Inlet control – A condition where discharge through a culvert is dictated by the depth of headwater and entrance geometry at the inlet.

Inspection and Test Plan (ITP) – Inspection and Test Plans (ITPs) cover inspection and testing as required by the contract documents for any particular job. They can include the following information:

- the work subject to inspection and test under that plan
- the name of the person completing the plan
- the criteria for acceptance.

The completed ITP should be signed by a properly authorised person to confirm the accuracy of the record.

Intensity-Frequency-Duration Data (IFD) – Rainfall data used in the calculation of the depths and intensities of defined rainfall events.

Invert – The lowest portion of the internal surface of a drain or culvert.

Lake – Under the Water Management Act (2000) (Appendix I), lake includes:

- a wetland, a lagoon, a saltmarsh and any collection of still water, whether perennial or intermittent and whether natural or artificial, and
- any water declared by the regulations to be a lake, whether or not it also forms part of a river or estuary, but does not include any water declared by the regulations not to be a lake.

Land use – The particular use or uses of land within a catchment such as central business, commercial, industrial, residential, open space and parks, major and minor roads.

Leaching – The removal of soluble material and colloids by percolating water.

Legal point of discharge – A point of discharge that is either under the control of a Local Authority or Statutory Authority, or at which discharge rights have been granted by registered easement in favour of the Local Authority or Statutory Authority, and at which discharge from a development will not create a worse situation for downstream property owners than that which existed before the development.

Levee – An earth or rock embankment constructed to prevent flooding of low-lying land or to control the level or direction of flow of a watercourse at a structure.

Level spreader – A device to convert channel or pipe flow to sheet flow to prevent concentrated, erosive flows from occurring and to enhance filtration.

Linear shrinkage – Linear shrinkage relates to the one-dimensional shrinkage of a soil paste moulded at its liquid limit, then oven dried at 105EC for 24 hours. It is expressed as a percentage of the original dimension and indicates the relative shrink-swell potential

of a soil. Problems can occur in interpreting results on dispersible soils (Mills *et al.*, 1980). General information on linear shrinkage is available in Charman and Murphy (2000).

Soil that significantly shrink and swell can cause problems for buildings and roads. They are called expansive or reactive soils. Consequently, linear shrinkage data, when considered with other data relating to particle size analyses, dispersion percentages, Emerson Classes and propensities to shrink or swell, provides valuable background material to the suitability of materials for use in earthworks.

Day-to-day variations in shrinkage and swelling occur because of changes in soil moisture levels. These can be affected by many factors, including rainfall, evaporation demands, tree roots, leaking pipes and groundwater seepages.

Loam – Soil consisting of a mixture of sand, silt and clay, which can contain organic matter.

Major drainage system – The major drainage system is that part of the overall drainage system designed to convey a specified rare flood event. This system can comprise:

(a) Open space floodway channels, road reserves, pavement expanses and other flow paths that can act as overland flow paths for flows greater than the capacity of the minor drainage system;

(b) Detention basins and lagoons; and

(c) Major underground piped systems installed where overland flow is either impractical or unacceptable.

Major road – A road to which is assigned a permanent priority for traffic movement over that of other roads.

Major storm – The design storm with an average recurrence interval selected based on satisfying requirements for flood immunity and safety. Design can vary according local authority guidelines. For most development in New South Wales, the major storm has an average recurrence interval of 1:100 years.

Minor drainage system – The minor drainage system includes kerbs and channels, roadside channels, inlets, underground drainage, junction pits or access chambers and outlets designed to contain and convey a design minor stormwater flow of specified average recurrence interval. This arrangement can also include:

(a) field gully inlet pits, installed to collect surface runoff from within allotments, as well as the roof water drainage provisions for buildings;

(b) cross drainage under minor roads where delay or inconvenience during major flows is acceptable. This also includes low flow pipes or box culverts installed under flood ways; and

(c) low flow pipes installed under drainage reserves or park areas.

Minor road – A road whose primary function is to provide access to individual properties.

Minor storm – The design storm with an average recurrence interval selected by satisfying requirements for convenience and safety of pedestrians and vehicles. Design can vary according to local authority guidelines. For most development in New South Wales, the minor storm has an average recurrence interval of between 1:2 and 1:10 years.

Mulch anchoring – A method used to increase the effectiveness of mulch against surface erosion by water and wind. Binding agents called tackifiers are mixed with the mulch in a water slurry before application.

Mulching – The application of plant residues or other suitable material to the land surface to conserve moisture, holds the soil in place, aids in establishing plant cover, increases infiltration and minimizes temperature fluctuations.

Nodules – Discrete segregations that have accumulated in the soil because of the concentration of some constituent, usually by chemical or biological action.

Non cohesive soil – A soil in which the fine fraction is lacking, resulting in a loss of the cohesive bonds associated with this fraction.

Normal flow conditions – A condition in open channel flow where the depth and velocity of flow achieved is consistent with the prevailing channel shape, slope and roughness.

Obvert – The highest portion of the internal surface of a culvert or arch.

Organic matter – Organic matter is present in soil mostly as:

- roots and root exudates
- incorporated plant residues and materials from their breakdown
- other macro and microorganisms
- respiration products from living organisms.

Organic matter contents are affected by climate, drainage, biological activity, landform and land management practices. It is rapidly depleted by cultivation because of higher oxidation rates (more exposed to air) and by exposing the normally inaccessible organic fraction to decomposition by soil organisms.

In the soil, organic matter is very important, influencing chemical fertility and the physical status, especially structure in medium to coarse-textured materials. It is a key component in determining soil fertility, stability, hydrology and land condition. So, it is more desirable to have higher levels of organic matter than lower levels.

Commonly, the amount of organic matter is derived from the test for organic carbon. To convert percent organic carbon to percent organic matter, multiply the results by 1.755.

Outlet – The point at which water discharges from a stream, river, lake, tidewater or artificial drain.

Outlet control – The situation where factors downstream of the culvert entry such as high water level at the outlet governs the discharge characteristics.

Outlet protection – scour protection placed downstream of a pipe or culvert outlet to complete the transition between pipe flow and open channel flow. Pipe outlet protection can be provided by energy dissipaters, channel protection (nonstructural and structural methods), or a combination of the two (c.f. apron).

Overland flow path – Open space floodway channels, road reserves, pavement expanses and other flow paths that convey flows typically in excess of the capacity of the minor drainage system.

Particle Size Analysis – Particle size analysis (PSA) determines the particle size distribution in a soil. There are various methods commonly used to derive particle size, but the one recommended here (AS 1289 C6.2) involves:

- crushing
- end-to-end shaking with a dispersant (usually Calgon)
- sieving
- sedimentation, measured with a hydrometer.

Size ranges are based on the international scale (Hazelton and Murphy, 1992).

Soil texture is a function of particle size distribution. It influences several aspects related to management of soil and surface waters. For example, the effectiveness of sediment retention structures at any particular site is greatly influenced by the nature of the soil materials at the sediment source. So, data should be presented with any Erosion and Sediment Control Plan showing the proportion of subsoils in the clay and silt sizes (i.e. <0.02 mm) with subsoils (it is the subsoils that are most available for erosion on construction sites). See Soil Texture Group.

Permeability – The property of a material by virtue of which a fluid such as water can pass through it.

Pervious Surface (pervious area) – A surface or area within a drainage catchment where some of the rainfall will infiltrate thus resulting in a reduced volume and rate of runoff, e.g. grassed playing fields, lawns, etc.

pH – Soil pH is a measure of the acidity or alkalinity of a soil. It relates to the concentration of the hydrogen ions (H^+) in the soil solution measured on a negative logarithmic scale of 1 to 14. The concentrations of hydrogen ions are equal to the hydroxyl ions (OH^-) at pH 7, greater below pH 7 (acid) and fewer above (alkaline).

In the urban environment, the importance of pH is usually confined to its effect on the availability of elements in the soil and, therefore, possible deficiencies and/or toxicities. Whether these elements are available to plants depends on their solubilities, being available only when in soluble forms. Note that the "essential" plant nutrients are in their most soluble forms around pH 6 to 7. Even so, plant roots only function above pH 3 and phosphate cannot be absorbed by them above pH 9.

A major problem with acid sulfate soil is that they lower the pH to levels where aluminium becomes soluble (Al3+). While aluminium is one of the most abundant elements found naturally in soil, it is usually found in insoluble forms. The soluble forms are toxic to most plant and animal life.

Piping – See tunnel erosion.

Rainfall erosivity factor – In the Revised Universal Soil Loss Equation (Appendix A), the rainfall erosivity factor, R, is a measure of the ability of rainfall to cause erosion. It is the product of two components: total energy (E) and maximum 30-minute intensity for each storm (I30). So, the total of *EI* for a year is equal to the R-factor. Rosewell and Turner (1992) have identified a strong correlation between the R-factor and the 2-year ARI, 6-hour storm event. It can be derived from:

$$R = 164.74(1.1177)^{S} S^{0.6444}$$

where S is the 2-year ARI, 6-hour ARI, rainfall event (mm) (Rosewell and Turner, 1992).

Rainfall intensity – The rate of rainfall in millimetres per hour.

Reno mattress – A mattress-shaped container made of wire mesh, filled with riprap and used to protect earth surfaces from the erosive action of water. It is similar to a gabion, but is used where a gabion would be unnecessarily deep, e.g. lining drop-down structures (c.f. gabion).

Retention basin – See detention basin.

Revetment – A facing of stone or other material lain on a sloping face of earth to maintain the slope in position or to protect it from erosion.

Revised Universal Soil Loss Equation – The Revised Universal Soil Loss Equation (RUSLE) (Appendix A) is designed to predict the long term, average, annual soil loss from sheet and rill flow at nominated sites under specified management conditions. The predicted losses are empirically derived and it is anticipated that the monitoring and comparison of actual soil loss onsite measured against that calculated will lead to a substantiation of the equation. The equation is represented by:

$$A = R\ K\ LS\ P\ C$$

where,

A	=	computed soil loss (tonnes/ha/yr)
R	=	rainfall erosivity factor
K	=	soil erodibility factor
LS	=	slope length/gradient factor
P	=	erosion control practice factor
C	=	ground cover and management factor.

Review of Environmental Factors REF (concept) – Broadly identifies, describes and assesses environmental advantages, disadvantages and constraints associated with a development.

Review of Environmental Factors REF (planning) – Identifies, describes and assesses the environmental advantages, disadvantages and constraints associated with the planning and preliminary design phases of a particular development.

Riprap – Medium to large size rock protection applied (usually by dumping) to the face of an embankment, in a waterway or as an outlet protection from a storage.

River – Under the Water Management Act (2000) (Appendix I), river includes:

- any watercourse, whether perennial or intermittent and whether comprising a natural channel or a natural channel artificially improved, and
- any tributary, branch or other watercourse into or from which a watercourse referred to in paragraph (a) flows, and
- anything declared by the regulations to be a river, whether or not it also forms part of a lake or estuary, but does not include anything declared by the regulations not to be a river.

NOTE: For the purposes of Controlled Activity Approvals (and exemptions to approvals) it is proposed that the "blue line" on topographic maps be used to identify watercourses. Watercourses shown on topographic maps as broken blue lines are deemed continuous if they lose definition and then reappear. Watercourses that were previously blue lines and have now been moved are still deemed to be blue lines in the new location.

Runoff – That portion of the water precipitated onto a catchment area that flows as surface discharge from the catchment area past a specified point.

Runoff coefficient – The coefficient of runoff (Appendix F) is the ratio of how much water is likely to runoff a site against how much rain falls in any particular storm event. It varies from site to site, being affected by many site attributes, especially soil and vegetation types and rainfall intensity. The particular coefficient of runoff selected for a site can greatly affect the design criteria for the various soil and water management structures adopted. Choice can be somewhat subjective and, accordingly, it should always be recorded on the Soil and Water Management Plan or Erosion and Sediment Control Plan.

Run-on – Water that accumulates at a site (compared with runoff water that exits a site).

Sand – Natural mineral particles that are smaller than 2mm, and free of appreciable quantities of clay and silt. Coarse sand usually designates sand grains with particle size between 2 and 0.2 mm, while fine sand usually designates sand grains with particle size between 0.2 and 0.02 mm. Where a particle size analysis includes "very fine sand", it covers the fraction 0.02 to 0.1 mm, while fine sand covers 0.1 to 0.2 mm. Note that particles finer than about 0.1 mm usually need a hand lens to seen them.

Sandy loam – A loam with a proportion of sand or grit sufficient to make the material friable.

Scour – A term commonly used to mean localised erosion of a bank or channel that typically occurs due to excessive slope, turbulence or flow velocity.

Sediment basin – A basin or tank in which stormwater containing settleable solids is retained to remove by gravity or filtration a part of the suspended matter.

Sediment curtain – A piece of material, typically geofabric, attached to floats and weights and extending from the floor of a waterbody (e.g. sea, lake, river) to the surface, and used to trap sediments. Also called silt curtain.

Sediment fence – A barrier typically consisting of permeable material stretched between and attached to supporting posts and entrenched in the earth.

Sediment trap – Generally, sediment traps are smaller versions of sediment basins.

Sedimentation – Deposition of material of varying size, both mineral and organic, away from its site of origin by the action of water, wind, gravity or ice.

Seeding – Refers to the establishment of perennial warm-season grasses for the stabilisation of disturbed soils.

Sheet flow – Water, usually storm runoff, flowing in a thin layer over the ground surface. Also called overland flow.

Silt – An alluvial material intermediate in particle size between sand and clay (0.002-0.02mm). It is usually non plastic.

Slaking – The natural collapse of a soil aggregate in water where its mechanical strength is insufficient to withstand the force of air escaping from within the aggregate.

Slope length-gradient factor – In the Revised Universal Soil Loss Equation (Appendix A), the slope length–gradient factor, LS, describes the combined effect of slope length and slope gradient on soil loss. It is the ratio of soil loss per unit area at any particular site to the corresponding loss from a specific experimental plot of known length and gradient.

Sod – A portable mass of established grass, turf, or groundcover plants.

Sodicity – A measure of the exchangeable sodium percentage (ESP) of soil material. Soil material with an ESP of less than 6 is regarded as non sodic; soil material with an ESP of 6 to 15 is sodic; while soil material with an ESP more than 15 is strongly sodic.

Soil and Water Management Plan – Soil and Water Management Plans describe the measures to be undertaken at development sites that, if carried out, will mitigate soil erosion and control pollution of sediment and nutrients to downslope lands and receiving waters both during and after development. They also include all the information contained in Erosion and Sediment Control Plans.

Soil binder (tackifier) – A biodegradable material used to bind the soil particles together and reduce the erosion hazard for a limited season (one to six months depending in the product and prevailing climatic conditions). Used in hydromulches, but can be used independently (c.f. hydromulching).

Soil erodibility factor (K-factor) – In the Revised Universal Soil Loss Equation (Appendix A), the soil erodibility factor, K, is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil texture is the principle component affecting K, but soil structure, organic matter and profile permeability also contribute. It is a quantitative value experimentally determined.

Soil horizon – A layer of soil, roughly parallel to the land surface, with morphological properties different from layers below and/or above it.

Soil Hydrologic Group – Four Soil Hydrologic Groups (USDA, 1993) discussed are considered here (Appendix F), derived from a consideration of their infiltration and permeability characteristics. These factors, in turn effect on generation of runoff. Vegetation is disregarded because it is usually stockpiled separately on construction sites or, sometimes, removed from construction sites altogether. The four Groups are:

Group A – very low runoff potential. Water moves into and through these soil materials relatively quickly, when thoroughly wetted. Usually, they consist of deep (>1.0 metres), well-drained sandy loams, sands or gravels. They shed runoff only in extreme storm events.

Group B – low to moderate runoff potential. Water moves into and through these soil materials at a moderate rate when thoroughly wetted. Usually, they consist of moderately deep (>0.5 metres), well-drained soils with medium, loamy textures or clay loams with moderate structure. They shed runoff only infrequently.

Group C – moderate to high runoff potential. Water moves into and through these soil materials at slow to moderate rates when thoroughly wetted. Usually, they consist of soils that have:

- moderately fine (clay loam) to fine (clay) texture
- weak to moderate structure and/or
- a layer near the surface that impedes free downward movement of water.

They regularly shed runoff from moderate rainfall events.

Group D – very high runoff potential. Water moves into and through these soils very slowly when thoroughly wetted. Usually, they consist of soils:

- that are fine-textured (clay), poorly structured, surface-sealed or have high shrink/swell properties, and/or
- with a permanent high watertable, and/or
- with a layer near the surface that is nearly impervious.

They shed runoff from most rainfall events.

Soil Texture Group – An important attribute of soils that affects the effectiveness of sediment retention structures is the proportion of particles finer than 0.02 mm. Particles that are finer than 0.02 mm are relatively difficult to trap in simple sediment retention basins, while those that are coarser are not. Therefore, soils are classified into three groups as follows:

- *Type D* – 10 percent or more of the soil material is dispersible fines
- *Type C* – less than 10 percent dispersible fines and 33 percent or less are finer than 0.02 mm
- *Type F* – less than 10 percent dispersible fines and more than 33 percent are finer than 0.02 mm.

Spillway – An open or closed outlet used to convey water from a reservoir or basin. Usually used to convey a given design runoff.

Stabilisation (soil) – The provision of adequate measures (vegetation, mulches, geofabrics, riprap, and other structural measures) to prevent erosion from occurring.

Stabilised material – A natural material modified to improve or maintain its load carrying capacity or reduce erosion. Modification can be by the addition of other natural materials such as sand, loam or clay or of manufactured materials such as bitumen, lime and cement.

Streambank protection – Measures used to protect existing streambanks from eroding. Measures can include loose or anchored materials such as large boulders, brush mats, geofabrics, logs, or concrete.

Structure – Soil structure refers to the size, shape and arrangement of particles and aggregates, and the size, shape and arrangement of voids or spaces separating the particles and aggregates.

Subcritical flow – Flow in a channel or conduit that has a Froude number less than 1, a depth greater than the critical depth and a velocity less than the critical velocity.

Subsoil drain – A drain below the ground surface, which collects subsurface water throughout its length.

Supercritical flow – Flow in a channel or conduit that has a Froude number less than 1, a depth less than the critical depth and a velocity greater than the critical velocity.

Surface condition – Surface condition refers to the characteristic appearance of the surface soil when dry. Conditions including cracking, firm, loose and soft.

Table drain – The side drain of a road next to the shoulders, having its invert lower than the subgrade level and being part of the formation.

Temporary seeding – Refers to the use of soil stabilisation with grasses that will establish quickly and have longevity of one year or less.

Terrace – A former flood plain on which alluvial deposition and erosion are barely active or inactive.

Terracing – Grading technique that reduces slope length through the creation of benches.

Texture – Soil texture is an estimate of the percentage clay, silt and sand and is determined by the size distribution of mineral particles finer than 2mm.

Time of concentration – The shortest time necessary for all points on a catchment to contribute simultaneously to runoff past a specified point.

Topsoil – The top layers of soil that supports vegetation.

Tunnel erosion – The removal of subsoil by water while the surface remains relatively intact; also called piping.

Unified Soil Classification System – The Unified Soil Classification System (USCS) is an engineering classification based on the particle size distribution and the characteristics of the soil's fine fraction (Casagrande, 1947). It is particularly relevant when applied to those materials used in engineering structures, such as sediment retention basins and other soil conservation structures. The USCS has a major advantage in that soil can be easily classified by experienced persons in the field. However, the system does require an understanding of soil properties that are beyond the scope of this course. For further information on the system, refer to Charman and Murphy (2000).

Vegetative protection – Stabilisation of erodible areas through covering with vegetation.

Watercourse – A river, creek or stream in which water flows permanently or intermittently in a natural or artificial channel.

Watertable – (1) In an aquifer, the upper limit of the portion of ground saturated with water; (2) The natural level at which water stands in a borehole or well under conditions of equilibrium; (3) The upper surface of unconfined groundwater below which the pores of rock or soil are saturated. A perched watertable is the surface of a local zone of saturation held above the main body of groundwater by an impermeable layer, usually clay, and separated from it by an unsaturated zone. Can be permanent or seasonal.

Waterfront land – Under the Water Management Act (2000) (Appendix I), waterfront land means:

- (a) the bed of any river, together with any land lying between the bed of the river and a line drawn parallel to, and the prescribed distance inland of, the highest bank of the river, or
- (a1) the bed of any lake, together with any land lying between the bed of the lake and a line drawn parallel to, and the prescribed distance inland of, the shore of the lake, or
- (a2) the bed of any estuary, together with any land lying between the bed of the estuary and a line drawn parallel to, and the prescribed distance inland of, the mean high water mark of the estuary, and
- (b) if the regulations so provide, the bed of the coastal waters of the State, and any land lying between the shoreline of the coastal waters and a line drawn parallel to, and the prescribed distance inland of, the mean high water mark of the coastal waters, where the prescribed distance is 40 metres or (if the regulations prescribe a lesser distance, either generally or in relation to a particular location or class of locations) that lesser distance.

Land that falls into two or more of the categories referred to in paragraphs (a), (a1) and (a2) can be waterfront land by virtue of any of the paragraphs relevant to that land.

Waterway – Waterways are long, longitudinal water conveyance structures that do not have, as an important part of their design, significant infiltration capacities, although this might occur. Their water conveyance capabilities should be protected by selection of suitable non erodible grasses (Table 5.1). Normally, they outlet to the natural drainage system, either directly or indirectly (c.f. grassed swale).

APPENDIX K

20230913 Planning Report

Western Parkland City Authority

Bradfield City Centre Master Plan Application, 215 Badgerys Creek Road, Bradfield NSW 2556 Lot 101 DP1282949

Planning Report

Prepared by WSP Australia Pty Ltd

September 2023

wpca.sydney

NSW GOVERNMENT

Acknowledgement of Country

Aboriginal people have had a continuous connection with the Country encompassed by the Western Parkland City (the Parkland City) from time immemorial. They have cared for Country and lived in deep alignment with this important landscape, sharing and practicing culture while using it as a space for movement and trade.

We Acknowledge that four groups have primary custodial care obligations for the area: Dharug/Darug, Dharawal/Tharawal, Gundungurra/Gundungara and Darkinjung. We also Acknowledge others who have passed through this Country for trade and care purposes: Coastal Sydney people, Wiradjuri and Yuin.

Western Sydney is home to the highest number of Aboriginal people in any region in Australia. Diverse, strong, and connected Aboriginal communities have established their families in this area over generations, even if their connection to Country exists elsewhere. This offers an important opportunity for the future of the Parkland City.

Ensuring that Aboriginal communities, their culture, and obligations for Country are considered and promoted will be vital for the future of the Parkland City. A unique opportunity exists to establish a platform for two-way knowledge sharing, to elevate Country and to learn from cultural practices that will create a truly unique and vibrant place for all.

Garungarung Murri Murri Nuru
(Beautiful Grass Country)
Artwork created by Dalmarri artists Jason Douglas and Trevor Eastwood for the Western Parkland City Authority

1 Executive Summary

1.1 Introduction

This Planning Report has been prepared in accordance with the State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (Western Parkland City SEPP) and Master Plan Guidelines that establish the master planning process for land within the Western Sydney Aerotropolis (Aerotropolis).

This Planning Report has been prepared in accordance with the Master Plan Requirements (WSA_MP02) issued under Clause 4.41 of the Western Parkland City SEPP.

This report accompanies the Master Plan Application for Bradfield City Centre submitted to the Department of Planning Environment (DPE) pursuant to Part 4.7 Division 2 of Western Parkland City SEPP.

The Planning Report has been prepared in consideration of the Western Sydney Aerotropolis Precinct Plan (Aerotropolis Precinct Plan).

The Western Parkland City Authority (WPCA) is seeking to secure a Master Plan approval for Bradfield City Centre, a 114.6-hectare (ha) site centred around a new Sydney Metro station.

1.2 Key Master Plan Site Details

Bradfield City Centre Master Plan Site is located at 215 Badgerys Creek Road, Bradfield. The site is within the Liverpool Council Local Government Area (LGA) and is legally described as Lot 101 DP 1282949.

The site has an area of 114.6 ha, with road access to Badgerys Creek Road located at the north-western corner. The site spans across the Aerotropolis Core and Wianamatta-South Creek Precinct, within Western Sydney Aerotropolis.

The site is predominantly zoned Mixed Use (MU) under the Western Parkland City SEPP, with a small portion of Enterprise (ENT) zoned land located in the north-western corner. The site includes Environment and Recreation (ENZ) zoned land mostly along Thompsons Creek.

1.3 The Proposal

The key vision of Bradfield City Centre Master Plan is:

Bradfield city centre is a 24/7 ecosystem of culture, creativity, and innovation in a living landscape of inspiration and experience. Here, ambition and opportunity come together in new ways to dream and deliver an extraordinary future for the people of Western Sydney and beyond. A future defined by our rich indigenous culture and shared Australian identity, by proud storytelling, respected heritage, and connection to country.

A future of bolder ideas and innovation fuelled by free-flowing knowledge and collaboration. A future of net zero footprints and smarter ways for people, the environment, and business to thrive together. Underpinned by ideals of diversity and inclusivity, progress and reflection, prosperity and sustainability, Bradfield city centre is a million

futures waiting to be written. – Urban Design Report, **Appendix B**.

Bradfield City Centre Master Plan seeks to refine the Aerotropolis Precinct Plan by delivering approximately 10,000 residential dwellings and 20, 000 + jobs up to and beyond 2056, providing more open space and green space, improving connectivity and legibility, identifying, and retaining significant views and sustaining the importance of Connections with Country.

A detailed summary of what the Master Plan is seeking approval for is provided within is **Section 6** of this report. This should be read in conjunction with Bradfield City Centre Site Specific Development Controls at **Appendix A**.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

The Master Plan includes the following:

- Site specific development controls which contain key development parameters including height of buildings, floorspace distribution, street layout, street wall height and setbacks.
- Design excellence strategy
- Exempt and complying development provisions.
- Amendments to the following:
    - *State Environmental Planning Policy (Precincts- Western Parkland City) 2021 (Western Parkland City SEPP),*
    - Western Sydney Aerotropolis Precinct Plan
    - Western Sydney Aerotropolis Development Control Plan Phase 2 (Phase 2 DCP)

The Master Plan does not propose permanent development in the existing 60m wide Special Purposes 2 (SP2) Infrastructure Zone corridor. A decision regarding future rail infrastructure in the corridor is the subject of review by Government.

Figure 1 provides an indicative concept image of Bradfield City Centre.

Figure 2 provides Bradfield City Centre Master Plan.

Figure 1 Indicative concept image of Bradfield City Centre

Source: Hatch Roberts Day – Bradfield City Centre – Master Plan Report

Figure 2 Bradfield City Centre Illustrative Master Plan

Source: Hatch Roberts Day – Bradfield City Centre – Master Plan Report

1.4 Amendments to the Statutory Planning Context

The Master Plan seeks amendments to the statutory planning context including:

- Western Parkland City SEPP:
  - Chapter 4, Part 4.6, Division 2 Exempt development
  - Land Reservation Acquisition Map – Sheet LRA_001.
- Western Sydney Aerotropolis Precinct Plan March 2022
  - Land Use and Structure Plan (Figure 3)
  - Blue – Green Infrastructure Framework (Figure 5)
  - Total Water Cycle Management (Figure 6)
  - Transport Network (Figure 8)
  - Active Transport Network (Figure 9)
  - Street Hierarchy Map (Figure 10)
- Western Sydney Aerotropolis Development Control Plan Phase 2 (Phase 2 DCP)
  - Amendment to include Bradfield City Centre Master Plan – Site Specific Development Controls as part of the Aerotropolis DCP.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

1.5 Justification of Master Plan

Since the Federal Government's announcement of the Western Sydney Airport in 2014, the NSW Government's vision of the land surrounding the airport has been detailed in several plans, policies, and Environmental Planning Instruments (EPIs).

The first phase of the Western Sydney Aerotropolis Planning Package was finalised in September 2020 and included the *Western Sydney Aerotropolis Plan (WSAP), Interim Western Sydney Aerotropolis Development Control Plan – Phase 1 (Phase 1 DCP)* and *State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 (Aerotropolis SEPP).*

In March 2022, The Aerotropolis SEPP, was consolidated into Chapter 4 'Western Sydney Aerotropolis' of the *State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (Western Parkland City SEPP),* as part of the government's wider suite of reforms to deliver a better planning system for NSW.

The *Western Sydney Aerotropolis Precinct Plan (Aerotropolis Precinct Plan)* for the initial precincts was finalised in March 2022, followed by the *Western Sydney Aerotropolis Development Control Plan – Phase 2 (Aerotropolis DCP)* which was finalised in November 2022 which has superseded the Interim Phase 1 DCP.

The justification of strategic and site – specific merit is demonstrated by the Master Plan as follows:

- The Master Plan is a direct result of several strategic plans, studies and documents undertaken by the New South Wales (NSW) Government including the Western Sydney Aerotropolis Plan and Western Sydney Aerotropolis Precinct Plan.
    - The objectives of the Master Plan align with the key vision, principles and priorities set out in these strategic documents. This responds to the master planning guidelines which requires all applications to align with the overarching vision and principles for the area.
- The Master Plan has undertaken a comprehensive evaluation of the sites physical and strategic attributes informing the proposed structure plan and development vision. This analysis has informed the structure plan and layout which is responsive to the surrounding context.
- The Master Plan identifies different character areas that are consistent with the current zoning for the site and complement the surrounding area without affecting the unique natural landscape.
    - Most of the developable area in Bradfield City Centre is zoned mixed use. This zoning allows for a wide range of commercial, civic, and residential uses that make up a thriving city centre and fosters opportunities for retail and commercial uses that will create local employment and a broader economic base for the future city centre.
    - The zoning enables residential development as part of a diverse mixed-use areas within proximity to Wianamatta-South Creek and Thompsons Creek.
- The Master Plan adopts a landscape led approach that contributes to the establishment of the blue-green infrastructure framework for the wider Aerotropolis region.
    - The Master Plan preserves, protects, and restores over 30 ha of new green space around Thompsons Creek consistent with the Precinct Plan. This will form part of a new regional parklands that retains and preserves ENZ and ENV, significant revegetation for biodiversity, creek restoration, integrated water management, recreation opportunities and cultural values.
- The Master Plan has been informed by Connecting with Country principles and ongoing Aboriginal Engagement.
- The Master plan is a visionary city that will evolve over time to become a renowned centre of excellence for innovation and city making that defines the Western Parkland City.
    - The site will provide a metropolitan centre that will seamlessly integrate with the Aerotropolis Core Metro Station and Western Sydney International Airport and become a future focus area for business, tourism, and social experiences.
    - The site has the capacity to deliver 10,000 apartments making a significant contribution to total supply and to diversifying housing supply within the Aerotropolis. Consistent with Objective 9 of the Western Sydney Aerotropolis Plan, Bradfield City Centre optimises the opportunity to provide diverse, affordable housing that is well located near employment opportunities and transport.
    - The site will contribute to the overall Aerotropolis Plan vision of 50,000 - 60,000 jobs and 20,000 - 24,000 residents in the Aerotropolis Core where Bradfield is located. This will aid in fast tracking economic prosperity across the Western Parkland City and complement the existing neighbouring centres, Greater Penrith, Liverpool, and Campbelltown-Macarthur centre.
    - The site will become a metropolitan centre for choice, specialising in advanced manufacturing, high technology industries, services, creative industries and science, technology, engineering, and mathematics (STEM) focused educational facilities, and will facilitate the emerging aerospace and defence industries.
    - The site will facilitate the development of a range of educational uses that are accessible by public transport and active transport.
    - The site has been designed to prioritise pedestrian and active transport within the Aerotropolis Core through infrastructure provision and amenity in the street network and the blue-green grid.

The Master Plan seeks amendments to SEPPs, Aerotropolis Precinct Plan, and the Phase 2 DCP. Justification

for these amendments is as follows:

- The master planning process has allowed for an iterative design process which has allowed for the improvement and refinement of the Aerotropolis Precinct Plan and Phase 2 DCP.
- The proposed amendments are consistent with the objectives of the Western Parkland SEPP and the Aerotropolis Precinct Plan.
- The proposed amendment is consistent with the Master Plan Guidelines in that it proposes an amendment to the Aerotropolis Precinct Plan and Western Parkland City SEPP to achieve a superior planning outcome but is consistent with the Aerotropolis Planning Framework.
- Will allow for better planning and built form outcomes to be delivered on the site in the future.
- Represents the actual ground conditions and will deliver more sustainable design outcome for the site.
- Have been determined based on extensive design and testing on the outcomes and minimisation of potential impacts.

The proposed amendments allow for a superior planning outcome to be provided across the site for the above-mentioned reasons.

1.6 Conclusion

This Planning Report has been prepared in accordance with the Western Parkland City SEPP, Master Plan Guidelines and Master Plan Application Requirements which outline the key requirements as part of the master planning process for land within the Aerotropolis.

The Master Plan has sought to mitigate environmental impacts and seeks to protect and enhance the key features of the natural environment. Overall, the Master Plan will have a positive economic and social impact and is within the public interest.

The Master Plan delivers on key objectives in both Commonwealth and State Policies; and provides for development activity, employment opportunities and will increase housing supply for the future workers and population.

In consideration of the community and economic benefits of the proposal it is respectfully requested that the Department of Planning and Environment resolve to publicly exhibit this Master Plan for approval.

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Glossary of Terms

Term	Definition
Aerotropolis	Western Sydney Aerotropolis
AS	Australian Standard
BC Act	*Biodiversity Conservation Act 2016*
BCA	Building Code of Australia
CIV	Capital Investment Value
DA	Development Application
DCP	Development Control Plan
DP	Deposited Plan
DPE	Department of Planning and Environment
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2021*
ESD	Ecologically Sustainable Development
GFA	Gross Floor Area
LEP	Local Environmental Plan
LGA	Local Government Area
NSW Government	State Government of NSW
OLS	Obstacle Limitation Surface
Aerotropolis Precinct Plan	Western Sydney Aerotropolis Precinct Plan
Region Plan	A Metropolis of Three Cities – Greater Sydney Region Plan
SEPP	State Environmental Planning Policy
SSD	State Significant Development
SSDA	State Significant Development Application
TAP	Technical Assurance Panel
TfNSW	Transport for NSW
The Master Plan Site	The Master Plan Site is 215 Badgerys Creek Road, Bradfield. The Master Plan Site is legally described as Lot 101/DP1282949.
Western Parkland City SEPP	*State Environmental Planning Policy (Precincts – Western Parkland City) 2021*
WSAP	Western Sydney Aerotropolis Plan
WSI	Western Sydney International (Nancy-Bird Walton) Airport

2 Introduction

2.1 Report Purpose

This Planning Report has been prepared in accordance with the State Environmental Planning Policy (Precincts - Western Parkland City) 2021 (Western Parkland City SEPP) and Master Plan Guidelines that establish the master planning process for land within the Western Sydney Aerotropolis (Aerotropolis).

This report accompanies the Master Plan Application for Bradfield City Centre submitted to the Department of Planning and Environment (DPE) pursuant to Part 4.7 Division 2 of Western Parkland City SEPP.

2.2 The Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,200-ha growth area within the Western Parkland City, the gateway and economic powerhouse of Western Sydney.

The Aerotropolis surrounds the new Western Sydney International Airport and includes 10 precincts which focus on advanced manufacturing, technology, research, training, education, freight and logistics, agribusiness, and mixed-use development.

The first phase of the Western Sydney Aerotropolis Planning Package was finalised in September 2020, and includes the *Western Sydney Aerotropolis Plan* (WSAP), *Western Sydney Aerotropolis (Aerotropolis) State Environmental Planning Policy* (Aerotropolis SEPP) and the *Western Sydney Aerotropolis Development Control Plan (DCP) Phase 1*.

On 1 March 2022, the Aerotropolis SEPP was consolidated into the State Environmental Planning Policy (Precincts – Western Parklands City) 2021 (Western Parkland City SEPP). The Aerotropolis Planning Package and supporting technical studies for the initial precincts was finalised on 25 March 2022. The Planning Package included amendments to the Western Parkland City SEPP and Aerotropolis Precinct Plan.

The proposed Master Plan Application for the Master Plan Site has been formed by the requirements of the WSAP, Western Parkland City SEPP, Final Aerotropolis Precinct Plan, and the Phase 2 DCP, as required by the Master Plan Guidelines.

2.3 Purpose of the Report

This Planning Report accompanies the Master Plan Application for Bradfield City Centre submitted to the Department of Planning and Environment (DPE).

This Planning Report has been prepared in accordance with the *State Environmental Planning Policy (Precincts – Western Parkland City) 2021* (Western Parkland City SEPP) and the Master Plan Guidelines that establish the optional master planning process for land within the Western Sydney Aerotropolis (Aerotropolis).

This Planning Report has been prepared in accordance with the Master Plan Requirements (WSA_MP02) issued under Clause 4.41 of the Western Parkland City SEPP.

The Western Parkland City Authority (WPCA) is seeking to secure a Master Plan approval for Bradfield City Centre, a 114.6 ha Master Plan Site centred around a new Sydney Metro station.

Chapter 4, Part 4.7 of the Western Parkland City SEPP sets out the statutory requirements for Master Plans in the Aerotropolis. Section 4.41 of the Western Parkland City SEPP states that a Master Plan must:

> *(a) (repealed)*
>
> *(b) specify the particular development that may be carried out as complying development on the land to which the master plan applies, and*
>
> *(c) contain development controls for the complying development, and*
>
> *(d) contain the matters required by the master plan guidelines.*

All matters were considered to have been adequately addressed within the Master Plan Application or in the accompanying appendices.

2.4 Purpose of Bradfield City Centre Master Plan

The Master Plan has been prepared in accordance with the Western Parkland City SEPP, Chapter 4, Part 4.7, Division 2, Section 4.41, and the Master Plan Guidelines and has progressed through Stage 3 of the master planning process including collaboration with the Western Sydney Aerotropolis Technical Assurance Panel (TAP). TAP feedback, to date, has been considered and implemented where appropriate.

The purpose of this Master Plan is to enhance the Aerotropolis Precinct Plan as it applies to Bradfield City Centre; Deliver the Master Plan vision and objectives and provide more detail for the coordinated delivery of Sydney's third City.

The Master Plan will guide future development in Bradfield City Centre through:

- Identifying the vision, objectives, Master Plan diagrams, and key outcomes for the future development of Bradfield City Centre
- Supplementing the Aerotropolis DCP with site specific development controls.
- Communicating the planning, design and environmental objectives and controls against which the relevant consent authority will assess future development applications in Bradfield City Centre.
- Ensuring the orderly, efficient, and environmentally sensitive development of Bradfield City Centre.
- Promoting high-quality urban design and environmental outcomes within Bradfield City Centre.

2.5 Changes to the Statutory Planning Context

The Master Plan seeks amendments to the statutory planning context including:

- Western Parkland City SEPP:
    - Chapter 4, Part 4.6, Division 2 Exempt development

  - Land Reservation Acquisition Map – Sheet LRA_001.
- Western Sydney Aerotropolis Precinct Plan March 2022*:*
  - Land Use and Structure Plan (Figure 3)
  - Blue – Green Infrastructure Framework (Figure 5)
  - Total Water Cycle Management (Figure 6)
  - Transport Network (Figure 8)
  - Active Transport Network (Figure 9)
  - Street Hierarchy Map (Figure 10)
- Western Sydney Aerotropolis Development Control Plan Phase 2 (Phase 2 DCP)
  - Amendment to include Bradfield City Centre Master Plan – Site Specific Development Controls as part of the Aerotropolis DCP.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

Overall, the proposed amendments achieve a better planning outcome for the Master Plan Site.

2.6 Intended Planning Pathways

The intended pathways for future development consent across Bradfield City Centre under the *Environmental Planning and Assessment Act 1979* will be the following:

- Exempt Development.
- Part 4 Approvals:
  - Complying Development Certificates.
  - Development Applications.
  - State Significant Development Applications.
- Part 5 Approvals:
  - Development without Consent (Review of Environmental Factors).

It should be noted that this Master Plan Application does not seek approval for any current or future development/works. Any future development will be subject to individual applications and do not form part of this Master Plan Application.

2.7 Supporting Technical Studies

The project team formed to deliver the Master Plan Application is outlined in **Table 1**. This report should be read in conjunction with the supporting information and plans that are appended.

Table 1 - Supporting documents and project team.

Specialist Technical Input	Consultant	Appendix
Master Plan Report	WPCA	**Appendix A**
Urban Design Report	Hatch Roberts Day	**Appendix B**
Response to Country	Hatch Roberts Day	**Appendix C**
Design Excellence Strategy	WPCA	**Appendix D**
Exempt and Complying Development Code	FPD Planning	**Appendix E**
Smart Cities Implementation Plan and Assessment Report	AECOM	**Appendix F**
Traffic Management Accessibility Plan Report	AECOM	**Appendix G**
Utility Infrastructure and Servicing Report	AECOM	**Appendix H**
Integrated Water Cycle Management Report	AECOM	**Appendix I**
Aviation Impact Assessment Report	AECOM	**Appendix J**
Flooding Impact Assessment	Advisian	**Appendix K**
Sustainability Report	Flux	**Appendix L**
Biodiversity Strategy and Impact Assessment Report	Biosis	**Appendix M**
Social Infrastructure Strategy Report	GHD	**Appendix N**
Economic Report	SGS Economics and Planning	**Appendix O**
Air Quality Impact Assessment Report	Todoroski Air Services	**Appendix P**
Noise and Vibration Impact Assessment Report	WSP Australia Pty Ltd	**Appendix Q**
Pedestrian Wind Environment Review Report	Windtech	**Appendix R**
Statement of Heritage Impact	Extent Heritage	**Appendix S**
Aboriginal Engagement Outcomes Report	GHD and Zio Engagement and Planning	**Appendix T**
Aboriginal Cultural Heritage Assessment Report	Extent Heritage	**Appendix U**
Infrastructure Delivery Strategy	WPCA	**Appendix V**
Earthworks Report	AECOM	**Appendix W**
Art and Culture Strategy Report	Artificer Projects	**Appendix X**
Bushfire Strategy and Impact Assessment Report	ELA	**Appendix Y**
Ground conditions Report	ERM	**Appendix Z**
Contamination Report	JBS&G	**Appendix AA**
Housing Strategy Statement Report	Macroplan	**Appendix BB**
Circular Economy (Waste and Services) Report	WSP Australia Pty Ltd	**Appendix CC**
Consultation Outcomes Report	WPCA Communication and Engagement	**Appendix DD**
24 Hour Economy Strategy Statement Report	Macroplan	**Appendix EE**
Survey Plan	RPS	**Appendix FF**
Explanation of Intended Effect	WSP Australia Pty Ltd	**Appendix GG**

Specialist Technical Input	Consultant	Appendix
Discussion Paper for proposed Aerotropolis Precinct Plan and DCP amendments	WSP Australia Pty Ltd	Appendix HH
Western Sydney Aerotropolis Precinct Plan Compliance Table	WSP Australia Pty Ltd	Appendix II
Western Sydney Aerotropolis Development Control Plan Phase 2 Compliance Table	WSP Australia Pty Ltd	Appendix JJ

3 Master Plan Requirements

3.1 Content of Master Plan

This Section has been prepared in accordance with the requirements of *Western Sydney Aerotropolis – Master Plan Guidelines – Guideline to Master Planning in the Western Sydney Aerotropolis December 2021* version.

A summary of the Master Guidelines requirements is provided in **Table 2**.

Table 2 – Summary of Master Guidelines

Guideline requirements	Master Plan Application Response
• Clearly present the future development being sought through the master plan, supported by plans, images and photomontages;	The proposed future development of Bradfield City Centre sought through this Master Plan Application includes the following items: • Streets and pedestrian accesses including Shared Streets, Pedestrian Links, including a green loop. • Urban areas, Mixed use zones and Enterprise zones. • Infrastructure corridors including Future rail corridor, Metro / Rail Stations, and Metro Plaza. • Transport corridors including Fifteenth Avenue (Metro Link Boulevard), Whitaker Road, City Walk West, City Walk East, Local Streets, Arterial roads, and Collector Streets. • Landscaping and outdoor spaces including Central Park, Ridge Park, Sportsgrounds, City Walk West, City Walk East, Green Loop, Local Parks, City Parkland West, City Parkland East, Parkland Promenade, Moore Gully Parkland, and a Performance / Events Area A detailed summary of what the Master Plan is seeking approval for is provided within is **Section 6** of this report. This should be read in conjunction with Bradfield City Centre Site Specific Development Controls at **Appendix A**. A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.
• Set out the intended pathways for future development consent, such as which areas will be subject to Complying Development and which areas will be subject to DAs	The intended pathways for future development consent across Bradfield City Centre under the *Environmental Planning and Assessment Act 1979* will be the following: • Exempt Development. • Part 4 Approvals: ○ Complying Development Certificates.

Guideline requirements	Master Plan Application Response
	○ Development Applications. ○ State Significant Development Applications. • Part 5 Approvals: ○ Development without Consent (Review of Environmental Factors). It should be noted that this Master Plan Application does not seek approval for any current or future development/works. Any future development will be subject to individual applications and do not form part of this Master Plan Application.
• Provide a justification and evaluation of the project, having regard to the economic, environmental, and social impacts of the project and the principles of ecologically sustainable development	The proposed master plan for Bradfield City Centre has been justified based on the following potential outcomes: • Economic: ○ The Master Plan will be a key catalyst for the overall development and economic success of the Aerotropolis, through the bringing together of key commercial land uses and knowledge-based industries contributing to the broader NSW Economy. ○ Job projections forecast total worker population will be approximately 20,000 + by 2056. ○ Economic and market drivers that will influence the future land use context in the Aerotropolis are diverse, and while some land uses will be immediately viable some will be delivered over time. • Environmental ○ The Master Plan has been designed to minimise, avoid, and mitigate environmental impact. Where potential impacts have been identified adequate mitigation measures have been provided within the relevant technical and specialist study. ○ Overall, the Master Plan and the long-term development of Bradfield City Centre will be undertaken to provide a positive long term environmental impact which incorporates the principles of Ecological Sustainable Development. • Social Impacts: ○ Residential development yields for Bradfield indicate a forecast total residential population of 15,000 – 23,000 people up to and beyond 2056, this will support the existing and future population of the Western Parkland City and Bradfield. ○ Job projections forecast total worker population of approximately 20,000 + by 2056, allowing jobs to be provided within the Western Parkland City region and closer to existing and planned residential areas. ○ It is anticipated that the needs of the population will change over time as Bradfield City and the broader Aerotropolis is developed, the cumulative impact of this increasing population will be continuously monitored to enable infrastructure to respond to the changes in demand. ○ The Master Plan will allow for key transport connections to be provided allowing access from residences to jobs.

Guideline requirements	Master Plan Application Response
	○ The Master Plan has been designed to allow for high amenity with large parks, open spaces, and public domain areas. • **Principles of Ecological Sustainable Development (ESD):** ○ The Master Plan will enable the delivery of Bradfield City Centre and also provide it the opportunity to be an example of a world-leading response to the challenges of climate change through planning, design, and delivery. The Principles of ESD will be achieved through sustainability design principles for water, waste, energy and heat, and targets including Green Star Communities 6 Stars.
• Be supported by technical information and investigations	This Master Plan Application is supported by specialist technical reports prepared by the relevant subject matter experts / technical experts. The outcomes of these technical investigations are discussed in detail within the relevant technical reports.
• Be technically robust and include an accurate assessment of the likely impacts of the proposal with justification of those impacts and their mitigation methods	A detailed assessment of the likely impacts of the proposed Master Plan is provided within **Section 12** of this report.
• Be sufficiently detailed and resolved for components or sections of the proposed master plan that seek to be undertaken as complying development	The following is proposed to be undertaken as exempt and complying development: • Changes to the exempt development provisions which apply to Bradfield City Centre, under the Western Parkland City SEPP, to provide for greater flexibility for early activation of the centre and enable special events and the use of the land for ongoing community and cultural events/ activities. • Expanded application of the following sections of the Code SEPP to Bradfield City Centre to ensure greater consistency with complying development provisions which apply across NSW: – Part 5A Industrial and Business Buildings. This includes provisions relating to change of use under Part 5A.6. Refer to the Exempt and Complying Development Strategy within **Appendix E**.
• Be as succinct as possible and written in language that is clear and easy to understand; and	This Planning Report and Application has been prepared to be as succinct as possible and written in simple English to ensure that it is clear and easy to understand for all audiences.
• Reflect and address stakeholder, agency, and community inputs (if required by the master plan requirements) and views.	This Planning Report has been prepared by considering the feedback provided to WPCA by the relevant stakeholders. The Master Plan Application has addressed this feedback through necessary modifications to the proposed master plan.
• Evidence of any pre-lodgement discussions, negotiations and/or agreements between parties on key issues and scope of work to be completed should be provided	Refer to **Section 13** of this Master Plan Application for a summary of the consultation activities that have been undertaken prior to the submission of the Master Plan Application for assessment.

Guideline requirements	Master Plan Application Response
in the master plan that is submitted for assessment.	

3.2 Master Plan Lodgement Checklist

This Master Plan Application has been prepared in reference to the Department of Planning and Environment– *Aerotropolis Technical Assurance Panel – Master Plan Lodgement Checklist* – April 2023.

This Master Plan Application has included the relevant documentation and technical analysis for Part A, Part B and Part C Lodgement as provided within **Table 3**.

Table 3 - Master Plan Lodgement Checklist

Part A		Lodgement Requirements	Supporting Documentation
Technical Assurance Panel Co-Design	*1.*	*A draft master plan report, is to be submitted and is to include the following plans, and is to follow the format set out in the Supplementary Guidance: Aerotropolis Technical Assurance Panel, under 'Master Plan structure'*	Refer to the Master Plan Report at **Appendix A**. Refer to the Urban Design Report at **Appendix B**.
	1.1	*Master Plan Site analysis*	
	1.2	*opportunities and constraints plan*	
	1.3	*Master Plan Site/lot layout*	
	1.4	*land use plan*	
	1.5	*height and floor space ratio (FSR) plan*	
	1.6	*gross floor area (GFA) calculations*	
	1.7	*road, street, and pedestrian network plan, including sections,*	
	1.8	*lot subdivision, dimensions, and Master Plan Site areas*	
	1.9	*public space, public domain, and landscaping (including maps, plans and sections)*	
	1.10	*locations for key public buildings including social/community infrastructure, and landmark building Master Plan Sites*	
	1.11	*detail on staging, infrastructure, and utilities sequencing (including maps)*	Refer to the Utility Infrastructure and Servicing Strategy at **Appendix H.** Refer to the Infrastructure Delivery Strategy at **Appendix V.**
	1.12	*Methods of infrastructure delivery (contributions/WIK etc), including an Infrastructure Delivery Plan*	Refer to the Infrastructure Delivery Strategy at **Appendix V.**
	1.13	*Green and Blue infrastructure (open space, stormwater, and key environmental areas for management/protection*	Refer to the Master Plan Report at **Appendix A**. Refer to the Urban Design Report at **Appendix B.**

		Refer to the Integrated Water Cycle Management Report at **Appendix I**. Refer to the Biodiversity Strategy and Impact Assessment Report at **Appendix M**.
1.14	*Building envelopes that respond to existing and proposed development controls, Master Plan Site constraints and opportunities to achieve excellence in amenity,*	Refer to the Master Plan Report at **Appendix A**. Refer to the Urban Design Report at **Appendix B**.
1.15	*Open space delivery plan*	Refer to the Master Plan Report at **Appendix A**. Refer to the Urban Design Report at **Appendix B**. Refer to the Infrastructure Delivery Strategy at **Appendix V.**
1.16	*Proposed locations for complying development and associated controls and parameters*	Refer to the Master Plan Report at **Appendix A**. Refer to the Exempt and Complying Development Code at **Appendix F.**
2.	*A planning assessment report addressing master plan requirements as well as a statement for compliance with the SEPP/Aerotropolis Precinct Plan/DCP. The statement should include justification for any inconsistencies with planning requirements. A table illustrating compliance is to be included.*	This Planning Report.
3.	*A Structure Plan, which should show as a minimum* *1.1 Preservation of the major infrastructure (metro/rail) corridor* *1.2 Provision of equitable access within the Master Plan Site* *1.3 Creation and preservation of any environmental zones along linear green corridors and parks* *1.4 Alignment of key roads with WSA Aerotropolis Precinct Plan and Western Parkland City SEPP requirements.*	Refer to the Master Plan Report at **Appendix A**. Refer to the Urban Design Report at **Appendix B**.
4.	*Recognise Country Strategy*	Refer to the Response To Country Report at **Appendix C**. Refer to the Urban Design Report at **Appendix B**.

			Refer to the Aboriginal Engagement Outcomes Report at **Appendix T**.
	5.	*Urban Design Report*	Refer to the Urban Design Report at **Appendix B**.
	6.	*Draft development control plan (if applicable)*	Refer to the detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.
	7.	*Supporting technical studies, strategies, plans or codes. Including but not limited to:* *7.1 Urban design* *7.2 Transport and Traffic, including a TMAP* *7.3 Flooding* *7.4 Recognise Country Strategy* *7.5 Heritage*	Refer to all supporting technical studies included as appendices.
	8.	*Design Excellence Strategy and Design Guidelines*	Refer to the Master Plan Report at **Appendix A**. Refer to the Design Excellence Strategy at **Appendix D.**
Part B		**Lodgement Requirements**	**Supporting Documentation**
Master Plan Lodgement for Statutory Assessment	*1.*	*Draft master plan report, including, but not limited to:*	Refer to the Master Plan Report at **Appendix A**. Refer to the Urban Design Report at **Appendix B**.
	1.1	*Master Plan Site analysis*	
	1.2	*Survey Plan*	
	1.3	*Opportunities and constraints plan,*	
	1.4	*Master Plan Site/lot layout*	
	1.5	*land use plan*	
	1.6	*height and floor space ratio (FSR) plan,*	
	1.7	*gross floor area (GFA) calculations*	
	1.8	*road, street, and pedestrian network plan, including sections*	
	1.9	*lot subdivision, dimensions, and Master Plan Site areas,*	
	1.10	*public space, public domain, and landscaping (including maps, plans and sections),*	
	1.11	*locations for key public buildings including social/community infrastructure and landmark building Master Plan Sites,*	
	1.12	*detail on staging, infrastructure, and utilities sequencing (including maps),*	Refer to the Utility Infrastructure and Servicing Strategy at **Appendix H.** Refer to the Infrastructure Delivery Strategy at **Appendix V.**
	1.13	*Methods of infrastructure delivery (contributions/WIK etc), including an Infrastructure Delivery Strategy.*	Refer to the Utility Infrastructure and Servicing Strategy at **Appendix H.**

		Refer to the Infrastructure Delivery Strategy at **Appendix V.**
1.14	*Green and Blue infrastructure (open space, stormwater, and key environmental areas for management/protection), including an open space delivery plan,*	Refer to the Master Plan Report at **Appendix A**. Refer to the Urban Design Report at **Appendix B**.
1.15	*Building envelopes that respond to existing and proposed development controls, Master Plan Site constraints and opportunities to achieve excellence in amenity.*	Refer to the Master Plan Report at **Appendix A**. Refer to the Urban Design Report at **Appendix B**.
1.16	*Draft Complying Development Code, including maps showing proposed locations for complying development and associated controls and parameters.*	Refer to the Exempt and Complying Development Code at **Appendix F.**
2	*Planning assessment report addressing master plan requirements as well as a statement of compliance with the SEPP/Aerotropolis Precinct Plan/DCP and any requirements included as part of the Technical Assurance Panel Final Advice Letter. The statement should include justification for any inconsistencies with planning requirements. A table illustrating compliance is to be included.*	This Planning Report.
3	*3D images to show: 3.1 Before and after development scenarios for cut and fill for development lot/pad creation and roads. 3.2 building envelopes for potential ultimate development scenario.*	Refer to the Urban Design Report - **Appendix B**. Refer to the Earthworks Report at **Appendix W**.
4	*Recognise Country Strategy*	Refer to the Urban Design Report at **Appendix B**. Refer to the Response To Country Report at **Appendix C**. Refer to the Aboriginal Engagement Outcomes Report at **Appendix T**.
5	*Draft development control plan (if applicable)*	Refer to the detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP and is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.
6	*Urban Design Report*	Refer to the Urban Design Report **Appendix B**.

	7	*Supporting technical studies, strategies, plans or codes to be approved as part of the master plan, including but not limited to those listed in Appendix D of the Western Sydney Aerotropolis DCP (where relevant). Relevant technical studies to be submitted– including but not limited to:* *7.1 Urban design* *7.2 Transport and Traffic, including a TMAP* *7.3 Flooding* *7.4 Recognise Country Strategy* *7.5 Heritage*	Refer to all supporting technical studies included as appendices.
	8	*Public space and open space delivery plan*	Refer to the Urban Design Report at **Appendix B**. Refer to the Infrastructure Delivery Strategy at **Appendix V.**
	9	*Infrastructure Delivery Strategy (including timing)*	Refer to the Utility Infrastructure and Servicing Strategy at **Appendix H.** Refer to the Infrastructure Delivery Strategy at **Appendix V.**
	10	*Design Excellence Strategy and Design Guidelines*	Refer to the Master Plan Report at **Appendix A** Refer to the Design Excellence Strategy at **Appendix D.**
Part C		**Lodgement Requirements**	**Supporting Documentation**
Aerotropolis Precinct Plan / SEPP amendment	1	*Request to amend the Western Parkland City SEPP/Aerotropolis Precinct Plan including:* *1.2 Amendments to SEPP and Aerotropolis Precinct Plan* *1.2.1 Maps identifying proposed amendments to both SEPP and Aerotropolis Precinct Plan maps and accompanying GIS data* *1.2.2 Amendments to written clauses (including complying development code)* *1.3 Justification of amendments/inconsistencies* *1.3.1 Strategic alignment with SEPPs, S9.1 Directions, Aerotropolis Precinct Plan, and local plans (housing strategy, employment strategy* *1.3.2 How this results in a superior planning outcome and supports the vision for the Aerotropolis being realised*	A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.
	2	*Draft Explanation of Intended Effect for the State Environmental Planning Policy (Precincts -Western Parklands City) 2021*	
	3	*Draft amendments to the Western Sydney Aerotropolis Precinct Plan*	

	4	*Draft amendments to the Western Sydney Aerotropolis Development Control Plan (if applicable)*
	5	*Draft Discussion Paper for any Aerotropolis Precinct Plan/DCP amendments.*
	6	*6. Relevant technical studies – including but not limited to:* *6.1 Urban design* *6.2 Transport and Traffic, including a TMAP* *6.3 Flooding* *6.4 Recognise Country Strategy* *6.5 Heritage* *6.6 Public space and open space delivery plan* *6.7 Infrastructure delivery plan (including timing)*
	7	*Relevant Maps and Plans*

3.3 Master Plan Requirements

The DPE have issued Master Plan Requirements (MPRs) to the Authority for the preparation of a Master Plan for Bradfield City Centre. This report has been prepared to address the following MPRs as outlined within **Table 4**.

Table 4 - Master Plan Requirements (summarised)

Requirement Reference	Requirement	Supporting Document
General requirements	*The Draft Master Plan:* • *be prepared by the nominated proponent – Western Parkland City Authority* • *be lodged on the NSW Planning Portal (note: this function is currently being established)* • *be accompanied by the consent of all landowners to which the master plan applies* • *address all relevant legislation (including the Objects of the EP&A Act, Environmental Planning Instruments (EPIs), and proposed EPIs* • *address all requirements of the Master Plan Guidelines (the Guidelines)* • *demonstrate consistency with the Western Sydney Aerotropolis Plan, the Western Sydney Aerotropolis Development Control Plan – Phase 2 and relevant guidelines (such as Aviation safeguarding and Recognise Country)*	Refer to the Master Plan Report at **Appendix A.** The Master Plan outlines that future Development Applications will need to address the Aviation Safeguarding Guidelines and the relevant provisions of the Section 2.10 of the Phase 2 DCP. This Master Plan Report and Appendices comprehensively addresses this Requirement.

Requirement Reference	Requirement	Supporting Document
	Note: the Phase 2 DCP is expected to be finalised October 2022 and will replace the Phase 1 DCP: • *detail and justify how the draft master plan proposes to amend the Aerotropolis Precinct Plan (the Aerotropolis Precinct Plan), (WPC SEPP), and the Stage 2 DCP, once finalised* • *demonstrates consistency with the Western City District Plan* • *demonstrates that the draft master plan provides for a superior planning outcome by meeting the criteria specified in the Guidelines* • *be accompanied by the required application fees, payable at different stages, calculated in accordance with the milestone agreement and Secretary's determination, and provide an estimate of jobs that will be created during the future construction and operation phases of the proposed draft master plan, all supported by a report by a qualified quantity surveyor* • *comply with these master plan requirements.*	
Key issues to be addressed	*1. Vision, values, and objectives*	Refer to the Master Plan Report at **Appendix A.** Refer to the Urban Design Report at **Appendix B**.
	2. Recognising Country	Refer to the Response To Country Report at **Appendix C**. Refer to the Master Plan Report at **Appendix A.** Refer to the Urban Design Report at **Appendix B**. Refer to the Aboriginal Engagement Outcomes Report at **Appendix T.**
	3. The draft master plan	Refer to the Master Plan Report at **Appendix A.** Refer to the Master Plan Report at **Appendix A**. Refer to the Urban Design Report at **Appendix B**.
	4. Interim uses	Refer to the Exempt and Complying Development Code at **Appendix E**.
	5. Social and cultural infrastructure and open space	Refer to the Urban Design Report at **Appendix B**. Refer to the Social Infrastructure Strategy at **Appendix T**.

Requirement Reference	Requirement	Supporting Document
	6. Housing	Refer to the Housing Strategy Statement Report at **Appendix BB**.
	7. Economic	Refer to the Economic Strategy at **Appendix O**. Refer to the 24-Hour Economy Strategy Statement Report at **Appendix EE**.
	8. Design excellence	Refer to the Master Plan Report at **Appendix A.** Refer to the Design Excellence Strategy at **Appendix D**.
	9. Complying development	Refer to the Master Plan Report at **Appendix A.** Refer to the Complying Development Code at **Appendix E**.
	10. Infrastructure and utilities	Refer to the Utility Infrastructure and Servicing Strategy at **Appendix H.** Refer to the Infrastructure Delivery Strategy at **Appendix V.**
	11. Transport, traffic, parking, and connectivity	Refer to the Traffic Management Accessibility Plan Report Assessment at **Appendix G**.
	12. Heritage	Refer to the Statement of Heritage Impact at **Appendix S**.
	13. Aboriginal cultural heritage	Refer to the Aboriginal Cultural Heritage Assessment Report (ACHAR) at **Appendix U.** Refer to the Aboriginal Engagement Outcomes Report at **Appendix T.**
	14. Flood planning	Refer to the Flooding Impact Assessment at **Appendix K**.
	15. Integrated water cycle management	Refer to the Flooding Impact Assessment at **Appendix K**. Refer to the Integrated Water Cycle Management Report at **Appendix I**.
	16. Biodiversity	Refer to the Biodiversity Strategy and Impact Assessment at **Appendix M**.
	17. Air quality and Odour	Refer to the Air Quality Impact Assessment at **Appendix P**.
	18. Noise and vibration	Refer to the Noise and Vibration Impact Assessment at **Appendix Q**.
	19. Earthworks	Refer to the Earthworks Report at **Appendix W**.
	20. Ground conditions	Refer to the Ground Conditions Report at **Appendix Z**.
	21. Aviation safeguarding	Refer to the Aviation Impact Assessment at **Appendix J**. The Master Plan outlines that future Development Applications will need to address the Aviation Safeguarding Guidelines and the relevant provisions of the Section 2.10 of the Phase 2 DCP.
	22. Contamination	Refer to the Ground Conditions Report Assessment at **Appendix Z**.

Requirement Reference	Requirement	Supporting Document
	23. Bushfire	Refer to the Bushfire Strategy and Impact Assessment at **Appendix Y**.
	24. Statutory applications	Refer to the Master Plan Report at **Appendix A**. Refer to the Urban Design Report at **Appendix B**.
	25. Health	Refer to the Social Infrastructure Strategy at **Appendix N**.

4 Master Plan Site Context

4.1 Master Plan Site Description

The street address for Bradfield City Centre is 215 Badgerys Creek Road, Bradfield (the Master Plan Site) within the Liverpool Council Local Government Area (LGA). The Master Plan Site is legally described as Lot 101/DP1282949 and has an area of 114.6 ha, with road access from Badgerys Creek Road located at the north-western corner. The Master Plan Site spans across the Aerotropolis Core and Wianamatta-South Creek Precinct, within Western Sydney Aerotropolis. The Master Plan Site is outlined in **Figure 3** below. A Survey Plan for the Master Plan Site is provided within **Appendix FF**.

The Master Plan Site is predominantly zoned Mixed Use under the Western Parkland City SEPP, with a small portion of Enterprise zoned land located on the north-western corner of the Master Plan Site. The Master Plan Site includes Environment and Recreation zoned land mostly along Thompson Creek.

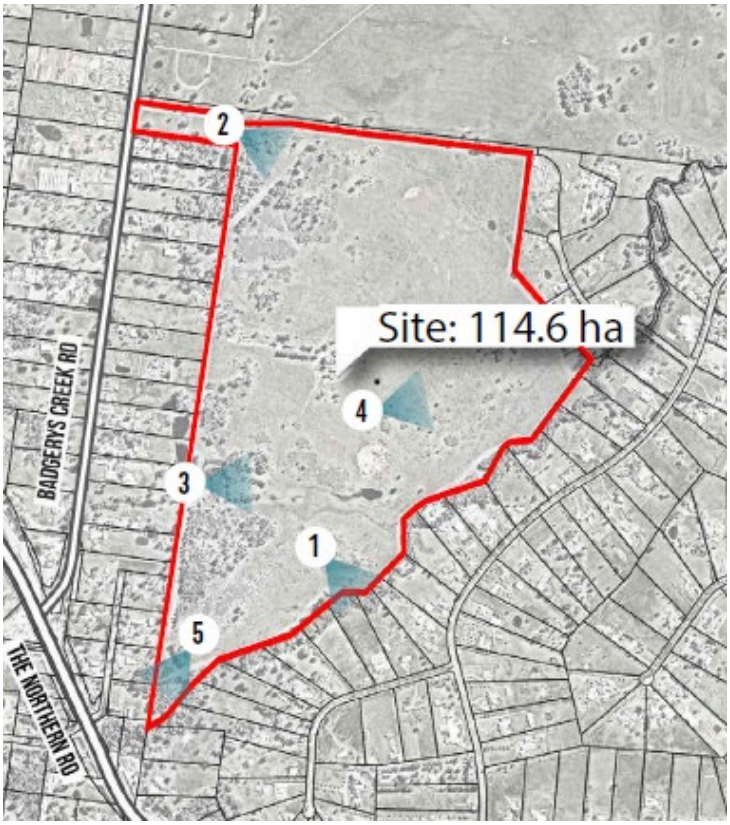
Figure 3 Master Plan Site

Source: Western Parkland City Authority

4.1.1 Existing Master Plan Site Conditions

The existing Master Plan Site conditions for the Master Plan Site are provided within **Figure 4.**

Figure 4 Existing Master Plan Site Conditions



The existing Master Plan Site conditions are summarised as:

- Creek (1) – The Thompsons Creek corridor is dense landscaped area which is currently inaccessible.
- Ridgelines (2) – Ridgelines exist at the high point of the Master Plan Site. Undulated land falls from the west to east of the Master Plan Site.
- Wetlands (3) – Areas of wetlands/ground water on the western edge of the Master Plan Site located near Moore Gully.
- Grasslands (4) – Grasslands cover the central portion of the Master Plan Site; these areas provide view corridors across the Master Plan Site.
- Woodlands (5) – Dense patches of Cumberland Plan and Alluvial Woodlands are dispersed across the Master Plan Site.

Photos of the existing Master Plan Site conditions are provided below.

Photo 1 Thompsons Creek (1)

Photo 2 Northwest Ridgeline (2)

Photo 3 Moore Gully Wetland (3)

Photo 4 Grasslands (4)

Photo 5 Woodlands (5)

Table 5 provides an overview of the existing Master Plan Site conditions.

Table 5 - Existing Master Plan Site Conditions

Master Plan Site Element	Condition
• Topography	• The Master Plan Site slopes gently from the highest point in the north-west down to Thompsons Creek in the east, with a total fall of 25m creating approximately 1:40 gradient.
• Hydrology	• The Master Plan Site hydrology is mainly centred around Thompsons Creek and Moore Gully which is the most prominent water feature located along the south-eastern edge of the Master Plan Site that is mainly flood affected. The Master Plan Site contains the following: ○ Thompsons Creek (subject to a 1 in 100-year flood event) ○ Wetlands/Dams

Master Plan Site Element	Condition
	○ 5th Order watercourses. ○ 4th Order ○ 3rd Order ○ 2nd Order ○ 1st Order
• Ecology	• The Master Plan Site contains areas of high, moderate, and low value vegetation including: ○ Environment and Recreation Zone (SEPP) ○ High to moderate vegetation. ○ Moderate Value Vegetation. ○ Low Value Vegetation ○ Swamp Oak. ○ Forest Red Gum. ○ Grey Box.
• Trees	• The Master Plan Site still contains: ○ Cumberland Woodland ○ Sydney Coastal River Flat Forest
• Wildlife Buffer	• The Master Plan Site excluded from the Wildlife Buffer as the Master Plan Site is within the Parkland Priority Areas which are included within the Phase 2 DCP.
• Aboriginal cultural values and Aboriginal heritage	• An Aboriginal Cultural Heritage Assessment Report (ACHAR) (**Appendix U**) has been prepared by Extent Heritage Pty Ltd. The assessment identified a total of sixteen Aboriginal sites were identified in the study area.
• Heritage	• No items of heritage value that are listed on Local, State or Commonwealth Registers exist on the subject Master Plan Site. There are two local heritage items and two State heritage listed items in the vicinity of the proposed development, Kelvin Grove, and the Church of the Holy Innocents. The Kelvin Grove state heritage item can be seen from the Master Plan Site. • Consideration of land use compatibility and integrated design must be undertaken if there is going to be future development conducted in the adjoining Kelvin Grove heritage Master Plan Site.
• Bushfire	• The Subject Land is currently mapped as bushfire prone land on the Liverpool City Council Bush Fire Prone Land (BFPL) map as published by the DPE. Parts of the Master Plan Site along the eastern and western boundaries are nominated as Categories 1 and 3 Bushfire Risk areas
• Transport and Access	• The Master Plan Site currently has only one access point off Badgerys Creek Road. The following transport corridors are planned across and around the Master Plan Site: ○ Sydney Metro and a 60m rail corridors running north – south through the Master Plan Site.

Master Plan Site Element	Condition
	○ 15th Avenue a key infrastructure corridor traversing the northwest corner of the Master Plan Site. ○ Whitaker Road another key infrastructure corridor connecting to the Master Plan Site from east.
• Obstacle limitation surfaces	• The Master Plan Site is located within the Obstacle Limitation Surfaces (OLS) area. The OLS is a series of surfaces that limit the heights of objects within certain proximity to airports to ensure unobstructed flying as defined by the Civil Aviation Safety Authority. • The Master Plan Site is located within a Reduced Level (RL) Limit of 125.5m which equates to building heights between 10-20 storeys.

5 Planning Framework

5.1 Strategic Planning Framework

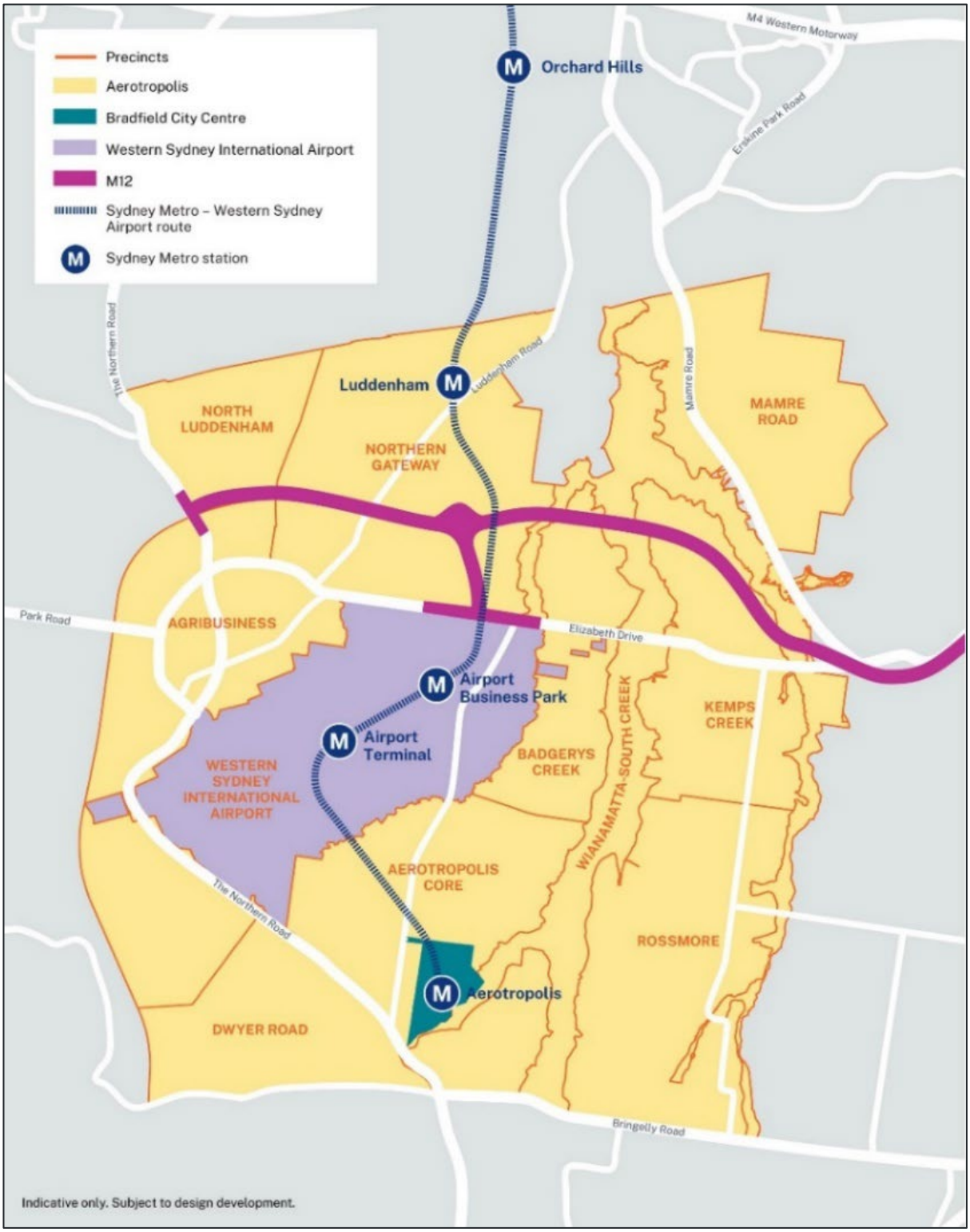
5.1.1 Strategic Context

Bradfield City Centre is located to the south-east of the new Western Sydney International (Nancy-Bird Walton) Airport at the intersection of Badgerys Creek Road and The Northern Road (see **Figure 5**).

The Sydney Metro Western Sydney Airport line runs through the Master Plan Site, providing connections from the key centre of St Marys through to stations at Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and the Aerotropolis which is located within the Master Plan Site.

Bradfield City Centre is surrounded by several key roads and infrastructure corridors including Bringelly Road, Badgerys Creek Road, Elizabeth Drive, M12 and The Northern Road.

Figure 5 Strategic Context



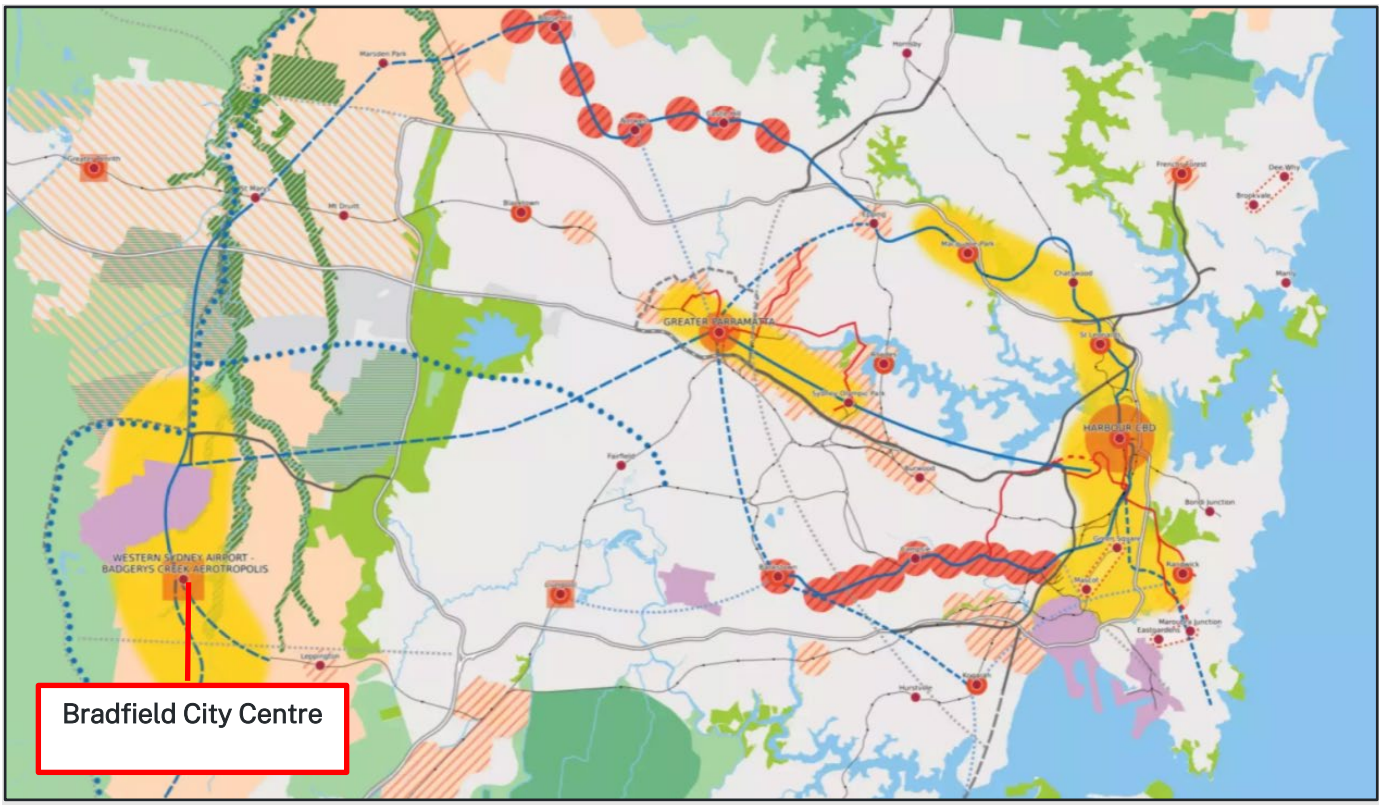
Source: Western Parkland City Authority

5.1.2 Greater Sydney Region Plan: A Metropolis of Three Cities

The Greater Sydney Region Plan: A Metropolis of Three Cities (Region Plan) outlines how Greater Sydney will manage growth and change in the context of social, economic, and environmental matters. It sets the vision and strategy for Greater Sydney that is to be implemented at a local level through to implementation of District Plans. The Region Plan provides broad Priorities and Actions which focus on the following 4 key themes: Infrastructure and collaboration, Liveability, Productivity and Sustainability.

The vision for Greater Sydney in the Region Plan is to rebalance Sydney into a metropolis of three unique but connected cities, the Eastern Harbour City, the Western Parkland City, and the Central River City with Greater Parramatta in its Centre. Bradfield City Centre is strategically positioned within the Western Parkland City as indicated in **Figure 6** below which outlines its context within Greater Sydney.

Figure 6 Strategic Context

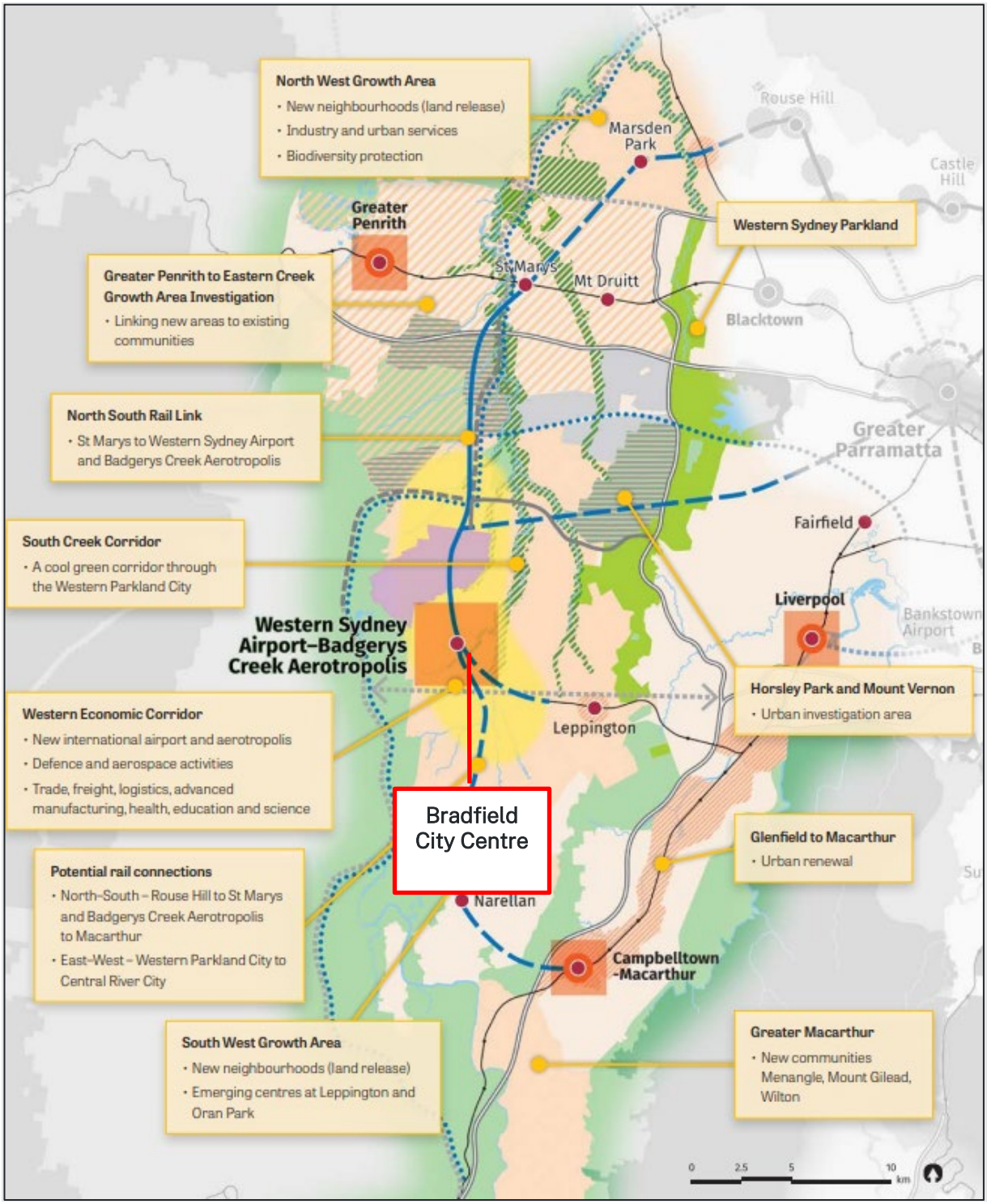


Source: Greater Sydney Commission, Greater Sydney Region Plan: A Metropolis of Three Cities – March 2018

The Master Plan Site is strategically located between the Northwest and Southwest Growth Areas and the existing and well-established centres of Greater Penrith, Liverpool, and Campbelltown-Macarthur. The Master Plan Site is located within the Western Economic Corridor that is centred around the Western Sydney Airport and the Aerotropolis. The Aerotropolis will contain uses such as defence and aerospace research and trade centres, freight, logistics, health and education facilities, science and advance manufacturing and research.

Bradfield City Centre's location within the Western Parkland City is outlined in **Figure 7** below.

Figure 7 Western Parkland City



Source: Greater Sydney Commission, Greater Sydney Region Plan: A Metropolis of Three Cities – March 2018

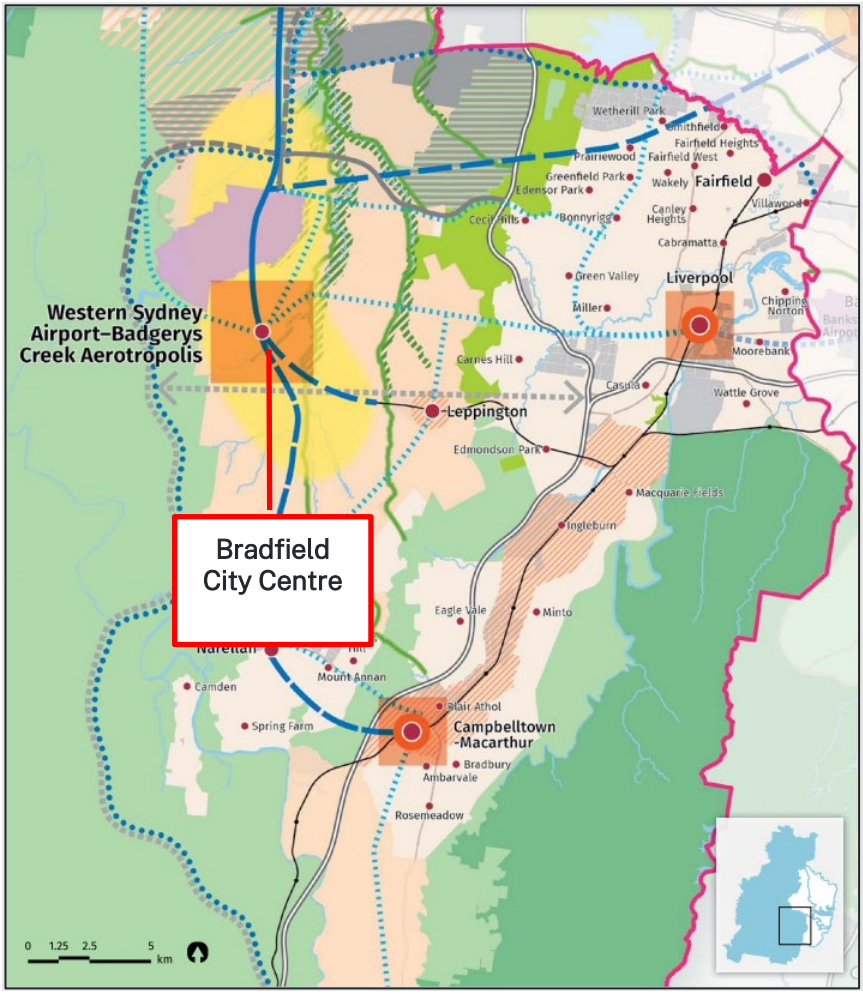
5.1.3 Western City District Plan

The Western City District Plan builds on the vision of the Region Plan and provides a 20-year plan to manage growth within the Western Parkland City. Over the next 20 years, the Western Parkland City will transform, drawing on the strength of the new Western Sydney Airport and the Aerotropolis. Leveraging off Western Sydney Airport and Aerotropolis is one of the principal objectives for delivering a metropolis of three cities, specifically in delivering more jobs and a diversity for jobs to the Western Parkland City.

Enhancing the transport connections to the Western Sydney Airport, Aerotropolis and Western Sydney Employment Area together with integrated land use, transport and infrastructure planning are fundamental requirements for delivering on this outcome. Maximising the opportunities of the infrastructure investment and planning for the Aerotropolis will achieve initiatives that support the growth of key industry sectors and skills development. In particular, Western Sydney Airport will create opportunities to grow a number of existing sectors.

Bradfield City Centre's location within the Western Parkland City is outlined in **Figure 8** below.

Figure 8 Western Parkland City



Source: Greater Sydney Commission, Greater Sydney Region Plan: A Metropolis of Three Cities – March 2018

The Western City District Plan provides Planning Priorities which are of relevance to the Master Plan, an assessment against these Planning Priorities is provided within **Table 6**.

Table 6 - Western City District Plan Planning Priorities assessment

Planning Priority	Master Plan Response
• *Planning Priority W3 Providing services and social infrastructure to meet people's changing needs*	The Master Plan recognises the changing composition of the Western Parkland Cities population and allows for the provision of services and social infrastructure to meet their needs in the future. The Master Plan will guide the provision of cultural facilities including parks and recreation areas which are accessible through safe walking and cycling connections which encourages the future population to more physically and socially active. Refer to the Social Infrastructure Strategy at **Appendix N** and Infrastructure Delivery Strategy at **Appendix V.** The Master Plan is consistent with the intention of Planning Priority W3.
• *Planning Priority W4 Fostering healthy, creative, culturally rich, and socially connected communities*	The Master Plan recognises the cultural richness and diversity of the Western Parkland City. The Master Plan will guide the delivery of a healthy, safe, and inclusive Bradfield City Centre. The Master Plan will facilitate opportunities for creative and artistic expression and participation. Refer to the Social Infrastructure Strategy at **Appendix N** and the Art and Culture Strategy at **Appendix X**. The Master Plan is consistent with the intention of Planning Priority W4.
• *Planning Priority W5 Providing housing supply, choice, and affordability with access to jobs, services, and public transport*	The Master Plan will guide the delivery of housing supply within Bradfield City Centre with access to jobs, services, and public transport. Future development applications within Bradfield City Centre will provide for the opportunity to provide key affordable housing development to support the population. Refer to the Housing Strategy Statement Report at A**ppendix BB**. The Master Plan is consistent with the intention of Planning Priority W5.
• *Planning Priority W6 Creating and renewing great places and local centres, and respecting the District's heritage*	The Master Plan has been designed using a place-based and collaborative approach to deliver a people-friendly public realm and open space areas. The Street network has been designed to balance the needs for people and movement. Social infrastructure has been integrated within the fine grain urban form. The fine grain urban form will allow for a diverse land use mix, high amenity, and walkability. The Master Plan allows for the recognising and celebration of character of the Western Parkland City. Refer to the Master Plan Report at **Appendix A.** Refer to the Urban Design Report at **Appendix B**. Refer to the Response To Country Report at **Appendix C**. The Master Plan is overall consistent with the intention of Planning Priority W6.
• *Planning Priority W7 Establishing the land use and transport structure to deliver a liveable, productive, and sustainable Western Parkland City*	The Master Plan has been designed to ensure that there is an integration between land use and transport planning to allow connections to deliver a 30-minute city. Bradfield City Centre is well serviced by metro and road infrastructure to allow the movement in and out of the Aerotropolis. Refer to the Traffic Management Accessibility Plan Report at **Appendix G**. The Master Plan is consistent with the intention of Planning Priority W7.
• *Planning Priority W8 Leveraging industry opportunities from the Western Sydney*	The Master Plan has been designed and provides for the leveraging of opportunities from the Western Sydney Airport and the overall Aerotropolis. The Master Plan will enable for the creation of economic opportunities and has considered the growth of

Planning Priority	Master Plan Response
Airport and Badgerys Creek Aerotropolis	international trade sectors, tourist, and the visitor economy. Refer to the Economic Report at **Appendix O**. The Master Plan is consistent with the intention of Planning Priority W8.

5.1.4 Western Sydney City Deal

The Western Sydney City Deal, signed on 4 March 2018, brings together the Australian and New South Wales governments and the eight Western Parkland City councils to deliver transformative change to the region over the next 20 years.

The Western Sydney City Deal delivers on Smart Cities Plan and the Western City District Plan. The Western Sydney City Deal includes six commitments: connectivity, jobs for the future, skills and education, liveability, and environment, planning and housing and implementation and governance.

The three tiers of government are working together to deliver the 38 City Deal commitments and create quality outcomes for the Western Parkland City community. The Master Plan overall supports the Western Sydney City Deal through delivery and implementation of a Master Plan to support the growth of the Aerotropolis, Western Parkland City and the community.

5.1.5 The Aerotropolis Planning Framework

Since the Federal Government's announcement of the Western Sydney Airport in 2014, the Government's vision of the land surrounding the airport has been detailed in several plans, policies, and environmental planning instruments (EPIs).

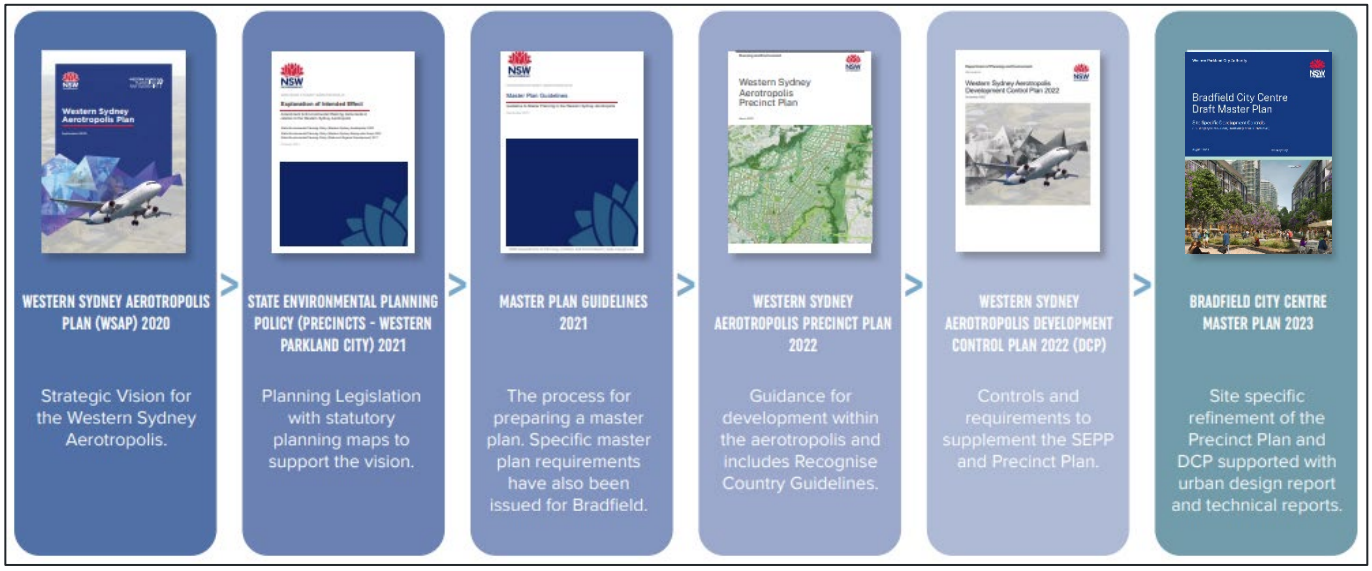
The first phase of the Western Sydney Aerotropolis Planning Package was finalised in September 2020 and included the Western Sydney Aerotropolis Plan (WSAP), Interim Western Sydney Aerotropolis Development Control Plan – Phase 1 (Phase 1 DCP) and State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 (Aerotropolis SEPP).

In March 2022, The Aerotropolis SEPP, was consolidated into Chapter 4 'Western Sydney Aerotropolis' of the State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (Western Parkland City SEPP), as part of the government's wider suite of reforms to deliver a better planning system for NSW.

The Western Sydney Aerotropolis Precinct Plan (Aerotropolis Precinct Plan) for the initial precincts was finalised in March 2022, followed by the Western Sydney Aerotropolis Development Control Plan – Phase 2 (Aerotropolis DCP) which was finalised in November 2022 which has replaced the Interim Phase 1 DCP.

The Aerotropolis Planning Framework is outlined within **Figure 9**.

Figure 9 Aerotropolis Planning Framework



The Master Plan document also funnctions as a site specific amenment to the Aerotropolis DCP.

5.1.6 Western Sydney Aerotropolis Plan

The Western Sydney Aerotropolis Plan was released in September 2020 and sets the planning framework for the Western Sydney Aerotropolis. An overview of the key considerations of have been provided within **Table 7**.

Table 7 - Western Sydney Aerotropolis Plan

Chapter	Key Principles/Guiding Directions	Addressed by Master Plan
2. A vision for the Aerotropolis		
• 2.1 Achieving the vision – a landscape-led approach	• *Retain water in the landscape* • *Preserve, extend, and restore the green* • *Locate transit corridors within walking distance to landscape amenity* • *Orientate urban development towards landscape amenity, connected to transit corridors* • *Adopt urban typologies*	The Master Plan has been designed from a landscape led approach that includes the retaining of water elements on Master Plan Site, preserving and providing green spaces within walking distances from the key city blocks, civic spaces, and transport corridors. For further information, refer to the Urban Design Report, **Appendix B.** New parks and green spaces are proposed in walking distance of state transit corridors which location cannot be changed. Changes to local street network, proposed in the Master Plan, were aligned with the placement of landscape amenities to facilitate access. The Master Plan has started with Country included connecting with country principles. Refer to the Urban Design Report, **Appendix B,** and the Connecting with Country Strategy at **Appendix C**.

Chapter	Key Principles/Guiding Directions	Addressed by Master Plan
	• *Starting with Country*	
• 2.2 Creating a global gateway	• *N/A.*	The Master plan aims to contribute to the Aerotropolis becoming a regionally and internationally significant employment area as provides for future commercial and employment land uses consistent with the land use zonings of the Western Parkland City SEPP
• 2.3 Designing a cool, new green city with great places	• *2.3.1 Public domain*	The Master Plan has been designed to have an urban form that can be accessed through walking and cycling paths located within short distances of public transport nodes. Future development of the Master Plan Site will contribute to the delivery of a cool, green, and safe City Centre within the Aerotropolis. For further details refer to the Urban Design Report at **Appendix B.**
• 2.4 Transitioning to an Aerotropolis	• *N/A.*	The Master Plan has been designed to be transitioned over development horizons of 2026, 2036 and 2056. This will allow Bradfield City Centre to be developed and grown as the overall Aerotropolis precinct evolves.
• 2.5 Retaining a green, biodiverse landscape	• *N/A.*	The Master Plan has been designed to retain the existing landscape where appropriate. It also provides for the provision of a green and biodiverse landscape. For further details refer to the Urban Design Report at **Appendix B**.
4. Infrastructure		
• 4.1 Blue-Green Infrastructure Framework	• *4.1.1 Wianamatta–South Creek as Blue–Green infrastructure* • *4.1.2 Parkland elements* • *4.1.3 Soils* • *4.1.3 Biodiversity conservation*	The Master Plan considers preservation and extension of the existing blue-green grid infrastructure within the Master Plan Site by capitalising on the existing natural assets on the Master Plan Site, provisioning a variety of new parklands and green open space at different scales, ranging from local parks to regional parklands along the Wianamatta-South Creek corridor. For further information refer to the Urban Design Report at **Appendix B.** The relevant biodiversity conservation initiatives included in the Master Plan for the appropriate locations within the Master Plan Site are discussed in the Biodiversity Strategy and Impact assessment in **Appendix M**.
• 4.2 Future transport network	• *4.2.1 Transport services* • *4.2.2 Network development*	The Master Plan provides transport networks including walking and cycling across Bradfield City Centre. Bradfield City Centre Master Plan has been designed by considering the location, alignment and arrangement of the existing major infrastructure corridors and planned transport linkages to ensure the efficiency of the future transport network within the Master Plan Site. Refer to the Urban Design Report **Appendix B** for further information.

Chapter	Key Principles/Guiding Directions	Addressed by Master Plan
• 4.3 Digital infrastructure – smart cities	• *4.3.1 Connectivity infrastructure* • *4.3.2 Sensor infrastructure* • *Communications infrastructure*	The provision of digital infrastructure and a foundation for smart city systems has been considered in the design of the City. Refer to the Smart Cities Implementation Plan and Assessment Report, **Appendix F** for further information.
• 4.4 Energy infrastructure	• *N/A.*	The Master Plan has been informed by expert technical input for the placement of utility frameworks including energy infrastructure within the Master Plan Site. Refer to the Utility Infrastructure and Servicing Strategy, **Appendix H** for further information.
• 4.5 Integrated water, wastewater, and recycled water services	• *4.5.1 Warragamba Pipeline*	The Master Plan Site is located significantly away from the Warragamba Pipeline and the proposed master plan and development on Master Plan Site will not have any impacts on the pipeline.
• 4.6 Social and cultural infrastructure	• *4.6.1 Community* • *4.6.2 Health and education* • *4.6.3 Arts and creativity* • *4.6.4 Aboriginal cultural strategy* • *4.6.5 Heritage*	The Master Plan includes parklands and open green spaces within 10-minute walking distance of residential and employment areas in accordance with the Premiers Priorities. Refer to the Master Plan Report at **Appendix A** and Urban Design Report, **Appendix B,** and the various plans included ion it shows this arrangement on Master Plan Site. The Master Plan has been prepared in response to social infrastructure needs study, that provides a breakdown of relevant facility requirements for the Master Plan Site including health, education, arts, and creativity. For further details refer to the Social Infrastructure strategy, **Appendix N.** The Master Plan has been prepared by considering the Connecting with Country principles that are embedded in the Master Plan. The requirements and recommendations made by the various heritage impact assessments and studies accompanying this application to ensure European and Aboriginal Heritage items are properly recognised and protected during the future development of the Master Plan Site. Refer to the Statement of Heritage Impact **Appendix S,** and the Aboriginal Cultural Heritage Assessment, **Appendix U**.
5. Safeguarding the 24-hour airport		
• 5.1 National Airports Safeguarding Framework	• *5.1.1 Aircraft noise and development* • *5.1.2 Protected operational airspace* • *5.1.3 Wildlife strike*	The proposed indicative built form for the Master Plan scheme, including the maximum heights of buildings in the City Centre, has been prepared in accordance with the Obstacle Limitation Surface requirements stipulated in the SEPP and the Aerotropolis Precinct Plan. This was to ensure future development of the Master Plan Site will not adversely impact the Protected operational airspace.

Chapter	Key Principles/Guiding Directions	Addressed by Master Plan
	• *5.1.4 Wind shear and turbulence* • *5.1.5 Public safety areas* • *5.1.6 Lighting and reflectivity* • *5.1.7 Wind turbines* • *5.1.8 Communications, navigation, and surveillance facilities* • *5.1.9 Helicopter landing Master Plan Sites associated with hospitals*	The Master Plan Site excluded from the Wildlife Buffer as the Master Plan Site is within the Parkland Priority Areas which are included within the Phase 2 DCP. The Master Plan Site is not located within or in proximity to any of the following areas: • Wind shear and turbulence, • Public safety areas, • Lighting and reflectivity, The Master Plan has been prepared to ensure that development and operation of Bradfield City Centre will not generate any adverse impacts on the ongoing operation of the airport. Refer to the Aviation Impact Assessment, **Appendix J**. The Master Plan outlines that future Development Applications will need to address the Aviation Safeguarding Guidelines and the relevant provisions of the Section 2.10 of the Phase 2 DCP. The proposal for the Master Plan Application does not seek approval for the placement of any wind turbines on communications navigation and surveillance facilities on the Master Plan Site. The proposal for the Master Plan Application does not seek approval for any helicopter landing Master Plan Sites associated with hospitals. The Master Plan has been prepared in consideration of Aircraft noise and its impact on land uses. Refer to Noise and Vibration Impact Assessment **Appendix Q** and the Aviation Impact Assessment at **Appendix J**.
6. Resilience and adaptability		
• 6.1 Circular economy	• *6.1.1 Waste and resource recovery and management* • *6.1.2 Low carbon precincts*	The Master Plan has been prepared by considering sustainability, resilience and adaptability principles provided by the expert technical studies. Circular economy principles are embedded in the preparation of the Master Plan scheme to deliver a low carbon precinct. Refer to the Sustainability Report at **Appendix L** and the Circular Economy (Waste and Services) Report at **Appendix CC.**
• 6.2 Urban cooling	• *N/A.*	The Master Plan has been prepared to mitigate the impacts of the urban heat island effect. Refer to the Sustainability Report at **Appendix L**.
• 6.3 Waterway health and management	• *N/A.*	The Master Plan has been prepared to manage waterway health. Works are intended to maintain natural flow paths and connections wherever practical to achieve based on layout constraints within the Master Plan. Refer to the Integrated Water Cycle Management Report at **Appendix I**.

Chapter	Key Principles/Guiding Directions	Addressed by Master Plan
• 6.4 Hazard management and recovery	• *6.4.1 Climate change resilience* • *6.4.2 Floodplain management*	The Master Plan has been designed to provide a regenerative outcome for the natural environment, existing blue links will be restored, and green links established. An integrated water cycle approach and WSUD will be provided to mitigate the impacts of climate change, refer to the Sustainability Report at **Appendix L**. The Master Plan has been prepared to manage the impacts of flooding, refer to the Flooding Impact Assessment **Appendix K** and the Integrated Water Cycle Management Report at **Appendix I** .
7. Aerotropolis Precinct Planning		
• 7.1 Common strategic outcomes and implementation strategies	• *7.1.1 Common strategic outcomes Common strategic outcomes:* ○ *Productivity* ○ *Sustainability* ○ *Infrastructure and collaboration* ○ *Liveability*	Overall, the proposed Master Plan scheme for Bradfield City Centre provides for the common strategic outcomes of: • A productive and employment focused city centre to be economically productive for future workers and future residential population. • A sustainable city centre through the provision of blue, green links, trees and landscaping contributing to the vision of a green Western Parkland City. • The key infrastructure to support the city centre will be through collaboration with State agencies including TfNSW and DPE. • A liveable city centre through the provision of residential, civic, and open space areas to support the future residential population.
• 7.2 Vision and land uses – initial precincts	• *7.2.1 Aerotropolis Core Precinct*	The proposed Master Plan scheme will allow for desirable and suitable land uses to be provided on Master Plan Site including advanced manufacturing, aerospace, research and development activities, high technology industries, education, and professional services. Refer to the Urban Design Report, **Appendix B** for further information.
• 7.3 Expected planning outcomes – initial precincts	• *7.3.1 Aerotropolis Core Precinct Liverpool LGA*	The Master Plan is overall consistent with the key considerations and strategic outcomes for the Aerotropolis Core Precinct.
8. Infrastructure funding and provision		
8.2 Infrastructure funding	• *8.2.1 Special Infrastructure Contributions* • *8.2.2 Local infrastructure contributions*	The Master Plan has been prepared in consideration of existing and draft Special Infrastructure Contributions and Local Infrastructure Contributions. Refer to the Infrastructure Delivery Strategy at **Appendix V**.
• 8.3 Sydney Metro Western Sydney Airport alignment	• *N/A.*	The Master Plan has been designed by considering the provisions and requirements established by Sydney Metro Western Sydney Airport. Refer to the Master Plan Report at **Appendix A** and the Urban Design Report **Appendix B** for further information.

Chapter	Key Principles/Guiding Directions	Addressed by Master Plan
• 8.4 Utilities and services	• *8.4 Utilities and services*	The Master Plan has been prepared to allow enabling services to be provided on Master Plan Site prior to major development of the Master Plan Site. Refer to the Utility Infrastructure and Servicing Strategy, **Appendix H** for further information.

5.2 Statutory Planning Framework

This Planning Report considers and provides an assessment of the potential impacts associated with the proposed Bradfield City Centre Master Plan.

The following section provide responses to the relevant Secretary's Master Plan Requirements.

5.2.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) sets out the statutory planning framework for NSW. The Act aims to promote the orderly and economic use and development of land, facilitate ecologically sustainable development, and integrate economic, environmental, and social considerations as part of the decision-making processes for environmental planning and assessment matters.

Table 8 below provides an assessment of the proposal against the objectives contained within Section 1.3 of the EP&A Act. This assessment demonstrates that overall, the proposal is consistent with the EP&A Act objectives.

Table 8 - Objectives Environmental Planning and Assessment Act 1979

Objectives	Comment/Response
(a) to promote the social and economic welfare of the community and a better environment by the proper management, development, and conservation of the State's natural and other resources,	The proposal promotes the social and economic welfare of the Western Parkland City future community and workforce through the provision of sustainable, innovative, and resilient parkland city centre that will cater for changing demands of its future population by maintaining and enhancing the natural environment of the Master Plan Site, through design excellence and efficient assessment of the proposed development. The proposed Master Plan has been prepared based on the findings of technical studies that investigated the natural resources throughout the Master Plan Site and in its surroundings against the proposed Master Plan to ensure the long-term delivery.
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental, and social considerations in decision-making about environmental planning and assessment,	The proposed Master Plan promotes high level innovative and ecologically sustainable development solutions for the Master Plan Site through the integration of the relevant economic, environmental, and social considerations (elaborated by the findings of the technical studies accompanying the proposal) with regulatory requirements and applicable standards. This multi-disciplinary design and planning approach, with specific focus on 'ecologically sustainable development' of the Master Plan Site, has been implemented by WPCA from the start of the design process to ensure the proposed scheme and detailed aspects of the Master Plan satisfy the vision and objectives for a 22nd century city centre.

Objectives	Comment/Response
	The proposed comprehensive environmental planning and assessment pathway, including a design excellence strategy and urban design guidelines for the Master Plan Site, in combination with the already established controls and requirements under the Western Parkland City SEPP, Aerotropolis Precinct Plan, and the Phase 2 DCP, ensures the future development of Bradfield City Centre will deliver the expected outcomes and vision established for the Master Plan Site by the Western Sydney Aerotropolis Plan. Details of the sustainability initiatives are included within **Appendix L.**
(c) to promote the orderly and economic use and development of land,	The proposal promotes the orderly and economic use and development of land through staging of the proposal that is aligned with the prescribed zoning for the Master Plan Site. The strategic and statutory urban planning investigation provided in this report, ensures the proposed Master Plan will deliver an economically feasible development outcome that will be aligned with the applicable strategic and statutory planning policies and the WPCA's vision for the City Centre. The proposed staging of the Master Plan is supported by an infrastructure staging plan to ensure land will be sufficiently serviced for the intended uses.
(d) to promote the delivery and maintenance of affordable housing,	Residential uses, including affordable housing, will be delivered in the mixed-use zoned area. Bradfield City Centre will provide affordable housing options to facilitate the 'work near home' opportunity for all.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities, and their habitats,	Areas of 'High Biodiversity Value' that show the 'Existing Native Vegetation' (ENV) within the Master Plan Site are zoned 'Environment and Recreation' (ENZ) under the Western Parkland City SEPP to minimise permissible development in these areas and to ensure the protection of threatened and other species of native flora and fauna. The proposed public domain strategy and urban design and landscaping schemes prepared for the Master Plan Site have acknowledged the high value of the existing native vegetation on Master Plan Site and ensured they will be protected by proposing the new green reserves to co-locate with the ENV sections. These reserves are surrounded by public open space, regional parks, and similar type of green spaces to provide an improved buffer between ENV and development areas. The proposal has sought to avoid any adverse environmental impacts on native flora and fauna and ecological communities recognised by planning requirements for the Aerotropolis as discussed in the Biodiversity Strategy and Impact Assessment at **Appendix M**.
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),	The proposal has been sympathetically designed in response to the Aboriginal cultural heritage present on Master Plan Site and the built heritage on surrounding sites. This approach has been outlined within the Statement of Heritage Impact at **Appendix S** and Aboriginal Cultural Heritage Assessment Report at **Appendix U**. The strategies used for the acknowledgement, promotion and sustainable management of these values are extensively discussed in the referenced technical studies accompanying this application. The strategies have also been considered in the preparation of the Urban Design principles that will guide the future development on Master Plan Site. Preservation of cultural heritage and cultural values have been reflected in public domain and urban design of the Master Plan. Refer to the Recognise Country Strategy Report at **Appendix C** and Urban Design Report **Appendix B.**

Objectives	Comment/Response
(g) to promote good design and amenity of the built environment,	The proposed urban design and public domain strategy has been prepared by a team of experienced urban designers, architects, and landscape architects. Advice provided by technical consultants as well as the strategic and statutory planning team has been taken into consideration to ensure compliance is achieved alongside the applicable requirements. Furthermore, the strategy proposal has been prepared to aim to deliver the best design outcomes for the Master Plan Site The proposal has been refined and finalised in consultation with the Technical Assurance Panel (TAP) and the other relevant state agencies during the TAP process to ensure WPCA's vision for the Master Plan Site can be delivered successfully. The proposal is supported by a Design Excellence Strategy at **Appendix D.**
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,	The proposal does not seek the consent for any building works. Construction works and their approvals will be sought at later stages. However, quality assurance requirements are considered as part of the relevant technical studies prepared for this application.
(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	The proposed Master Plan has been subject to extensive consultation with different levels and agencies of Government up to this stage.
(j) to provide increased opportunity for community participation in environmental planning and assessment.	Community consultation has been undertaken as part of the Master Plan process and will continue through the delivery phase.

5.2.2 Environmental Planning and Assessment Regulation

The *Environmental Planning and Assessment Regulation 2021* (Regulation) reduces the administrative burden and complexity in development assessment processes by updating and refining application and notification requirements.

Section 35 of the EPA Regulation provides for the following:

35 Additional requirements for development applications in certain areas of Sydney

(2) A person must not apply to a consent authority for consent to carry out development on the following land unless the application is accompanied by an assessment of the consistency of the development with the relevant plan—

> *e) land in the Western Sydney Aerotropolis under State Environmental Planning Policy (Precincts—Western Parkland City) 2021, Chapter 4,*

This Master Plan Application provides an assessment of the proposed Master Plan for Bradfield City Centre that is in Western Sydney Aerotropolis against the requirements of the *State Environmental Planning Policy (Precincts—Western Parkland City) 2021* within **Section 5.3.1** of this report.

5.3 State Environmental Planning Policies (SEPPs)

5.3.1 State Environmental Planning Policy (Precincts – Western Parkland City) 2021

The *State Environmental Planning Policy (Precincts – Western Parkland City) 2021* (Western Parkland City SEPP) applies to the land within the Western Parkland City and more specifically the Western Sydney Aerotropolis.

The aim of the Western Parkland City SEPP is:

> *(a) to facilitate development in the Western Sydney Aerotropolis in accordance with the objectives and principles of the Western Sydney Aerotropolis Plan,*
>
> *(b) to promote sustainable, orderly, and transformational development in the Western Sydney Aerotropolis,*
>
> *(c) to ensure development is compatible with the long-term growth and development of the Western Sydney Airport (including in relation to the operation of the Airport 24 hours a day) and other critical transport infrastructure,*
>
> *(d) to promote employment and world-class innovation and provide for residential development in suitable locations,*
>
> *(e) to recognise the physical and cultural connection of the local Aboriginal community to the land and to incorporate local Aboriginal knowledge, culture, and tradition into development,*
>
> *(f) to preserve land for future infrastructure development,*
>
> *(g) to protect, maintain and enhance, and to minimise the impact of development on, trees and vegetation, soil quality and the health of waterways and to contribute to the conservation of biodiversity,*
>
> *(h) to recognise and protect the ecological and cultural value of Wianamatta–South Creek.*

The proposal has addressed the Western Parkland City SEPP aims through the design and intent of the Master Plan as follows:

- The proposed Master Plan will facilitate orderly development of the Master Plan Site within the Western Sydney Aerotropolis in accordance with the principles of the SEPP,
- The proposal incorporates the requirements of other state agencies, including critical infrastructure corridors and needs, in the design and implementation strategy for the Master Plan. The proposed development for the Master Plan Site has been designed and planned to not only satisfy airport standards but also to support its future operation by providing the amenities and services required by future users. The wide variety of mixed-use development proposed for the Master Plan Site and the diverse character areas and sub precincts, each addressing different types of demand, will ensure the long-term growth of the Aerotropolis will be catered for in the city centre.

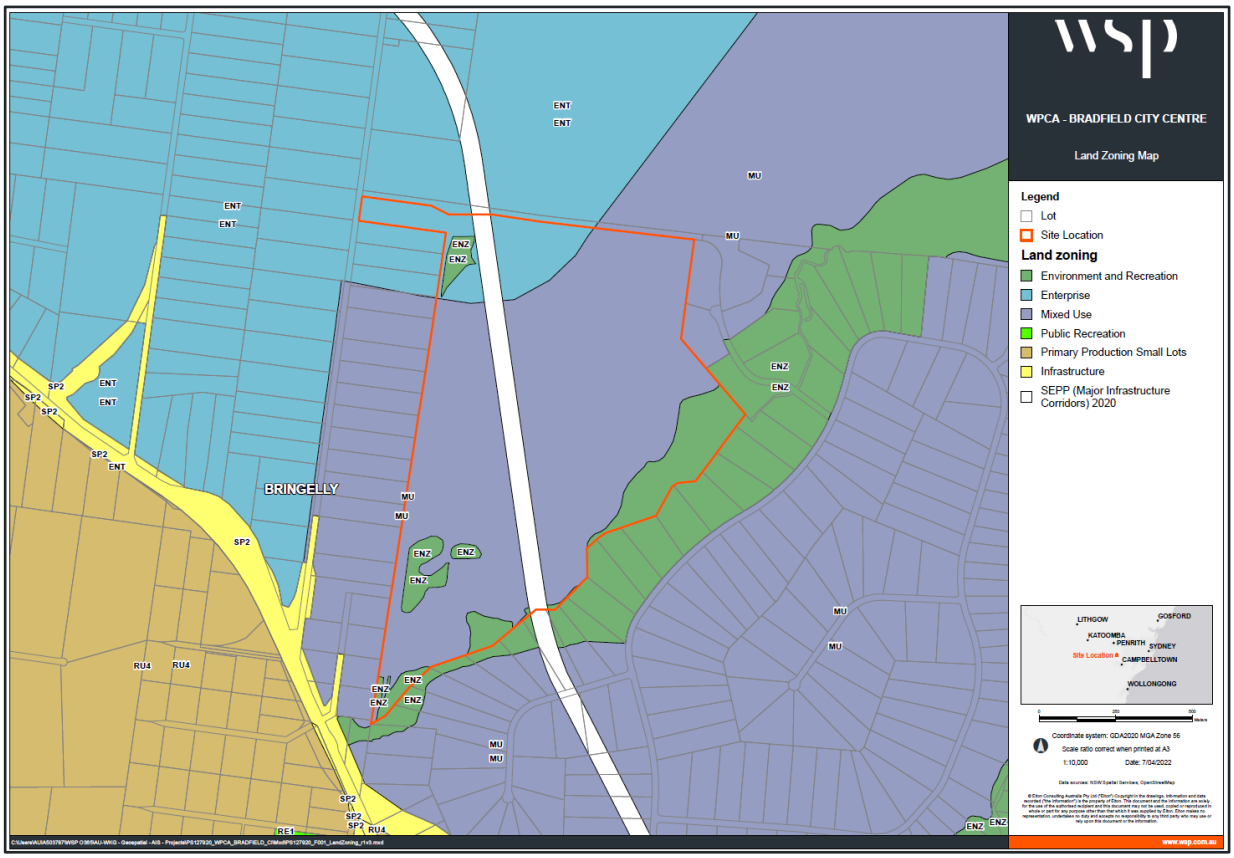
- The agglomeration of high-tech industries, educational institutes and research and development centres in proximity of high quality live and play areas within the city centre will encourage future development and growth.
- The Master Plan provides for the above development targets and delivery of high-quality urban form while recognising the physical and cultural connection of the local Aboriginal People through preservation of and promotion of the Master Plan Site history in design and implementation of the public domain strategy,
- The land reservation for future infrastructure development as required under the SEPP and the associated planning documents such as the Aerotropolis Precinct Plan and the Phase 2 DCP, has been considered and reflected in the proposed scheme for the Master Plan.
- Protecting the high-quality natural assets within the Master Plan Site such as threatened species and native flora and fauna, waterways, and natural land features, has been prioritised in the design and planning of the proposed Master Plan, but also promoting these values by seamlessly incorporating them in the overall scheme as regional parks or reserves to ensure their long-term maintenance has been prioritised. The aim is to minimise any potential adverse impacts that future development of the Master Plan Site may have on the natural environment and in particular the Wianamatta-South Creek.

Pursuant to the SEPP, the Master Plan Site is within the following zones:

- *Mixed Use (MU)*. The Mixed-Use area, coloured purple on the following land use zoning map, covers the majority of the Master Plan Site.
- *Enterprise (ENT)*. The Enterprise zoned area, coloured blue on the following land use zoning map, is located within the north-western corner of the Master Plan Site.
- *Environment and Recreation (ENZ)*. The Environment and Recreation zone exists along Thompsons Creek to the east of the Master Plan Site with two small areas of existing native vegetation towards the north-west and south-west corners of the Master Plan Site.
- SEPP (Transport and Infrastructure) 2021, Chapter 4 Major Infrastructure Corridors (formerly the SEPP (Major Infrastructure Corridors), identified in white through the centre of the Master Plan Site

The Land Use zoning for the Master Plan Site is provided for within **Figure 10**.

Figure 10 Land Use Zoning



Source: WSP

The *Permitted (with and without consent)* and *Prohibited* land uses in each of the zones under the Western Parkland City SEPP are provided below in **Table 9**.

Table 9 - Western Parkland City SEPP

Zoning	Permitted with Consent	Prohibited
Mixed Use	*Any development not specified in item 2 or 4*	*Air transport facilities; Airstrips; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Dual occupancies; Dwelling houses; Exhibition homes; Exhibition villages; Extractive industries; Forestry; General industries; Heavy industrial storage establishments; Heavy industries; Helipads; Highway service centres; Intensive livestock agriculture; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Rural industries; Rural supplies; Rural workers' dwellings; Secondary dwellings; Semi-detached dwellings; Sewage treatment plants; Timber yards; Transport depots; Truck depots; Turf farming; Warehouse or distribution centres; Waste or resource*

Zoning	Permitted with Consent	Prohibited
		management facilities; Water treatment facilities; Wharf or boating facilities.
Enterprise	*Any development not specified in item 2 or 4*	*Air transport facilities; Airstrips; Camping grounds; Caravan parks; Crematoria; Exhibition homes; Exhibition villages; Forestry; Heavy industrial storage establishments; Heavy industries; Helipads; Intensive livestock agriculture; Mortuaries; Open cut mining; Residential accommodation; Rural industries; Turf farming*
ENZ Environment and Recreation	*Any development not specified in item 2 or 4*	*Air transport facilities; Airstrips; Amusement centres; Backpackers' accommodation; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Centre-based child care facilities; Charter and tourism boating facilities; Correctional centres; Depots; Educational establishments; Electricity generating works; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Forestry; Freight transport facilities; Hardware and building supplies; Heavy industrial storage establishments; Helipads; Highway service centres; Hospitals; Hotel or motel accommodation; Industrial retail outlets; Industrial training facilities; Industries; Intensive livestock agriculture; Jetties; Medical centres; Mooring pens; Moorings; Mortuaries; Office premises; Open cut mining; Port facilities; Public administration buildings; Residential accommodation; Respite day care centres; Restricted premises; Rural industries; Service stations; Serviced apartments; Sex services premises; Specialised retail premises; Storage premises; Timber yards; Transport depots; Truck depots; Turf farming; Vehicle body repair workshops; Vehicle repair stations; Vehicle sales or hire premises; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water treatment facilities; Wholesale supplies*

The final land uses which will be in Bradfield City Centre will be determined at the individual development application stage. These future land uses will need to be permissible with consent in the Mixed Use, Enterprise and Environment and Recreation Zone.

The key development standards for consideration under the Western Parkland City SEPP are discussed within **Table 10**.

Table 10 - Western Parkland City SEPP

SEPP Clause	Provision	Proposal
Chapter 4, Part 4.3 Development Controls – Air transport facilities		
Chapter 4, Part 4.3 – 4.17 Aircraft Noise	*(2) Development consent must not be granted to noise sensitive development if the development is to be located on land that is in an ANEF or ANEC contour of 20 or greater.*	**Not applicable -** The Master Plan Site is not located within ANEC Contours of 20 or greater.
Chapter 4, Part 4.3 – 4.18 Building wind shear and turbulence	*(2) This section applies to development —* *(a) on land shown as the "Windshear Assessment Trigger Area" on the Lighting Intensity and Wind Shear Map, and* *(b) that penetrates the 1:35 surface.*	**Not applicable -** The Master Plan Site is not located within the Windshear Assessment Trigger Area.
Chapter 4, Part 4.3 – 4.19 Wildlife Hazards	*(2) Development consent must not be granted to relevant development on land in the 13 km wildlife buffer zone unless the consent authority —* *(a) has consulted the relevant Commonwealth body, and* *(b) has considered a written assessment of the wildlife that is likely to be present on the land and the risk of the wildlife to the operation of the Airport provided by the applicant, which includes —* *(i) species, size, quantity, flock behaviour and the particular times of day or year when the wildlife is likely to be present, and* *(ii) whether any of the wildlife is a threatened species, and* *(iii) a description of how the assessment was carried out, and* *(c) is satisfied that the development will mitigate the risk of wildlife to the operation of the Airport, including, for example, measures relating to —* *(i) waste management, landscaping, grass, fencing, stormwater, or water areas, or* *(ii) the dispersal of wildlife from the land by the removal of food or the use of spikes, wire, or nets.*	The Master Plan Site excluded from the Wildlife Buffer as the Master Plan Site is within the Parkland Priority Areas which are included within the Phase 2 DCP.
Chapter 4, Part 4.4 – 4.20 Wind Turbines	*(2) Development for the following purposes is prohibited on land in the 3 km zone —* *(a) electricity generating works comprising a wind turbine,* *(b) wind monitoring towers that are not ancillary or incidental to the Airport.*	**Complies -** The proposal does not seek to provide any wind turbines or wind monitoring towers.
Chapter 4, Part 4.21 Lighting	*(2) Development consent must not be granted to development for the following purposes on land shown as the "6km Lighting Intensity Radius", a "Light Control Zone" or a "Runway Boundary" on the Lighting Intensity and Wind Shear Map unless the consent authority has consulted the relevant Commonwealth body —*	**Complies -** The proposal does not provide details for future lighting, as this will be dealt with separately by future development applications. The current Master Plan Application does not seek approval to provide, install and/or operate any external lighting.

SEPP Clause	Provision	Proposal
	(a) installation and operation of external lighting (whether coloured or white lighting) in connection with development for the following purposes— *(i) classified roads,* *(ii) freight transport facilities,* *(iii) heavy industrial storage establishments,* *(iv) recreation facilities (major),* *(v) recreation facilities (outdoor),* *(b) installation and operation of external lighting in connection with construction works that is likely to be obtrusive or create light spill outside the land on which the construction works are carried out.*	
Chapter 4, Part 4.22 Airspace operations	*(2) This section applies to development on land shown on the Obstacle Limitation Surface Map that is a controlled activity within the meaning of Part 12, Division 4 of the Airports Act 1996 of the Commonwealth*	**Complies -** The Master Plan Site is located within the obstacle limitations surface area. The proposal does not seek to conduct any controlled activities, this will be subject to future development applications.
Chapter 4, Part 4.23 Public Safety	*(2) Development for the following purposes is prohibited on land shown as the "public safety area" on the Public Safety Area Map—* *Camping grounds; Caravan parks; Cemeteries; Centre-based child care facilities; Commercial premises; Community facilities; Correctional centres; Crematoria; Eco-tourist facilities; Education establishments; Entertainment facilities; Function centres; Funeral homes; Health services facilities; Heavy industrial storage establishments; Industrial retail outlets; Industrial training facilities; Industries; Information and education facilities; Passenger transport facilities; Places of public worship; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Residential accommodation; Service stations; Tourist and visitor accommodation*	**Not applicable -** The Master Plan Site is not located within the Public Safety Areas or the Runway Boundary.
Chapter 4, 4.23A Operation of Certain air transport facilities	*(2) Development consent must not be granted to development on land shown as the "Building Restricted Area" on the Building Restricted Area Map*	**Not applicable -** The Master Plan Site is not located within the Building Restricted Area.
Chapter 4, Part 4.4 Development controls–general		
Chapter 4, 4.25 Preservation of trees and vegetation in Environment and Recreation Zone and Cumberland Plain	*(4) Development consent under subsection (3) must not be granted unless the consent authority is satisfied that, in relation to the disturbance of native vegetation caused by the clearing—* *(a) there is no reasonable alternative available to the disturbance of the native vegetation, and* *(b) any impact of the proposed clearing on biodiversity values is avoided or minimised, and* *(c) the disturbance of the native vegetation will not increase salinity, and*	**Subject of merit assessment.** The Master Plan Site contains areas shown as High Biodiversity Value Area (Existing Native Vegetation). Future development applications across the Master Plan Site will be assessed on their merits if they propose disturbance of any native vegetation.

SEPP Clause	Provision	Proposal
	(d) native vegetation inadvertently disturbed for the purposes of construction will be re-instated where possible on completion of construction, and *(e) the loss of remnant native vegetation caused by the disturbance will be compensated by revegetation on or near the land to avoid a net loss of remnant native vegetation, and* *(f) the clearing of the vegetation is unlikely to cause or increase soil erosion, salination, land slip, flooding, pollution or other adverse land or water impacts.* *(5) Development for the following purposes is prohibited on land shown as "high biodiversity value" on the High Biodiversity Value Areas Map—* *(a) environmental facilities,* *(b) information and education facilities,* *(c) kiosks,* *(d) recreation areas,* *(e) recreation facilities (outdoor),* *(f) (Repealed)* *(g) water recreation structures.*	
Chapter 4, 4.25A Clearing of native vegetation	*(2) Development consent must not be granted to development on the land unless the consent authority is satisfied that the development will not result in clearing of native vegetation.*	**Subject of merit assessment.** The Master Plan Site contains areas shown as High Biodiversity Value Area (Existing Native Vegetation). Future development applications across the Master Plan Site will be assessed on their merits if they propose disturbance of any native vegetation.
Chapter 4, 4.26 Heritage conservation	*(2) Requirement for consent - Development consent is required for the following—* *(a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance)—* *(i) a heritage item,* *(ii) an Aboriginal object,* *(iii) a building, work, relic, or tree within a heritage conservation area,* *(b) altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 2 in relation to the item,* *(c) disturbing or excavating an archaeological Master Plan Site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged, or destroyed,* *(d) disturbing or excavating an Aboriginal place of heritage significance,* *(e) erecting a building on land—* *(i) on which a heritage item is located or that is within a heritage conservation area, or*	**Subject of merit assessment.** The Master Plan Site contains Aboriginal Sites and Heritage Sites are within the surrounding proximity. Future development consent and approvals will be required prior any alteration to these items. Refer to the Statement of Heritage Impact **Appendix S,** and the Aboriginal Cultural Heritage Assessment Report at **Appendix U** for a full assessment of this application against heritage matters.

SEPP Clause	Provision	Proposal
	(ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance, *(f) subdividing land—* *(i) on which a heritage item is located or that is within a heritage conservation area, or* *(ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.*	
Chapter 4, 4.27 Transport Corridors	*(1) Development consent must not be granted to the following development unless the consent authority has obtained the concurrence of Transport for NSW—* *(a) development on transport corridor land with a capital investment value of more than $200,000,* *(b) development that involves the penetration of ground to a depth of at least 2 metres below ground level (existing) on land within 25 metres (measured horizontally) of transport corridor land.*	**Complies** - The Master Plan application excludes the Major Infrastructure Corridor (MIC) from development land assessment. A decision regarding future rail infrastructure in the corridor is the subject of review by Government.
Chapter 4, 4.28 Warragamba Pipelines	*Development consent must not be granted to development on land shown as "Warragamba Pipeline" on the Warragamba Pipelines Map unless the consent authority—* *(a) has obtained the concurrence of Water NSW, and* *(b) is satisfied that the development will not adversely affect—* *(i) the quantity or quality of water in the Warragamba Pipelines controlled area (declared under the Water NSW Act 2014), or* *(ii) the operation and security of water supply pipelines from Warragamba Dam to Prospect Reservoir and associated infrastructure.*	**Not applicable** - The Master Plan Site is not located near or on land which is shown as Warragamba Pipeline.

5.3.2 Other relevant State Environmental Planning Policies

Other relevant SEPPS and Environmental Planning Instruments (EPIs) are discussed in **Table 11**.

Table 11 – Other relevant EPIs

SEPP	Provision / Discussion
State Environmental Planning Policy (Transport and Infrastructure) 2021	Under Chapter 2, Part 2.2, Division 4. Section 2.20 and 2.21 provide the general requirements for exempt development which are available on the Master Plan Site and for public authorities to complete exempt development within future development stages. Under Chapter 2, Part 2.3, Subdivision 2 there are requirements for development in or adjacent to road corridors and road reservations. Future development applications will need to make consideration of the relevant clauses prior to receipt of development

SEPP	Provision / Discussion
	consent. The purpose of the State Environmental Planning Policy (Transport and Infrastructure) 2021, Chapter 4 Major Infrastructure Corridors (formerly the Major Infrastructure Corridors SEPP) is: *(a) to identify land that is intended to be used in the future as an infrastructure corridor,* *(b) to establish appropriate planning controls for the land for the following purposes—* *(i) to allow the ongoing use and development of the land until it is needed for the future infrastructure corridor,* *(ii) to protect the land from development that would adversely impact on or prevent the land from being used as an infrastructure corridor in the future.* The relevant sections of the Transport and Infrastructure SEPP Chapter 4 are discussed below. Under Chapter 4, Section 4.3 all land within a future infrastructure corridor and the adjacent land as referred to in section 4.9(1)(b)–(d). The Sydney Metro West infrastructure corridor traverses the Master Plan Site north to south. This corridor includes a 400m referral zone for development with TfNSW. Under Chapter 4, Sections 4.7, 4.8 and 4.9 future development activities such as subdivision and excavation of land must meet the relevant criteria and requirements prior to a development consent can be granted by a consent authority. Future development applications on Master Plan Site will need to make detailed consideration. Under Chapter 4, Section 4.10 specifies TfNSW as the relevant acquisition authority for any land acquisitions under the *Just Terms Land Acquisition (Just Terms Compensation) Act 1991*. The Master Plan does not propose permanent development in the existing 60m wide Special Purposes 2 (SP2) Infrastructure Zone corridor. A decision regarding future rail infrastructure in the

SEPP	Provision / Discussion
	corridor is the subject of review by Government.
State Environmental Planning Policy (Resilience and Hazards) 2021	Under Chapter 4, Section 4.6 a consent authority must not grant consent to the carrying out of development on land unless it has considered whether the land is contaminated. If the land is considered contaminated and is unsuitable in its contaminated state and thus requires remediation to be made suitable for the proposed purpose. A Ground Conditions Report was undertaken by ERM Pty Ltd (**Appendix Z**). The key findings of the assessment found that the Master Plan Site is suitable for the for-land uses permitted under the National Environment Protection (Assessment of Master Plan Site contamination) HIL-A criteria. The proposal will include mixed use and enterprise uses, this includes medium density to high density residential, commercial, light industrial, retail, hotel, childcare, community, and education all of which are permitted uses under the HIL-A. A Contamination Report was undertaken by JBS&G (**Appendix AA**) which includes a Site Audit Statement.
State Environmental Planning Policy (Planning Systems) 2021, Chapter 2 State and Regional Development	Under Schedule 1 and Schedule 2 the Master Plan Site is not identified as a State Significant Precinct and the proposed Master Plan does not meet the thresholds for a State Significant Development. However, State Significant Development Applications can be lodged within Bradfield City Centre, these applications will be subject to separate development assessment processes. The State Significant Triggers are included within Schedule 1.
State Environmental Planning Policy (Biodiversity and Conservation) 2021	Under Chapter 2, Part 2.1, Section 2.3, Clause 1(a) outlines that the SEPP applies to the Master Plan Site as it is within the Liverpool Local Government Area. Under Chapter 2, Parts 2.2, 2.3, 2.4 and 2.5 future development applications will need to make considerations of the relevant clauses if they propose to clear vegetation and have the appropriate permit and consent to do so. The Master Plan does not seek development consent for the clearing of any vegetation. The general aims of the *State Environmental Planning Policy (Biodiversity and Conservation) 2021, Chapter 6 Bushland in urban areas* (formerly the Bushland in urban areas SEPP) are provided below: *(1) The general aim of this Chapter is to protect and preserve bushland within the urban areas referred to in Schedule 5 because of—* *(a) its value to the community as part of the natural heritage,* *(b) its aesthetic value, and*

SEPP	Provision / Discussion
	(c) its value as a recreational, educational, and scientific resource. Chapter 6, Section 6.2 outlines that the SEPP applies to the Master Plan Site as it is within the Liverpool Local Government Area as per Schedule 5. Under Chapter 6, Section 6.5 future development applications require consent to disturb bushland. The Master Plan Application does not seek development consent for disturbing bushland. Future development applications will require development consent prior to disturbing any bushland.

5.4 Other Legislation

5.4.1 Biodiversity Conservation Act 2016

The purpose of the *Biodiversity Conservation Act 2016* (BC Act) is to:

> *maintain a healthy, productive, and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.*

The BC Act is the key piece of legislation providing for the protection and conservation of biodiversity in NSW through the listing of threatened species and communities and Key Threatening Processes (KTPs). Impacts to threatened species are addressed under Section 7.3 of the BC Act that outlines the factors which must be considered in a Test of Significance (ToS). Where the ToS has determined that a proposal or development would result in a significant effect to threatened species a Biodiversity Offset Scheme (BOS) application is required.

The Master Plan Site has been partially certified for development under the Growth Centres Biodiversity Certification Order. The proposed Master Plan is within the area that is nominated as a "Certified Area" under the Growth Centres Biodiversity Certification Order. As the proposed Master Plan (Master Plan Site) area is deemed as a "Certified Area" ToS is not required for BC Act Listed Species.

Part 6 of the BC Act establishes a Biodiversity Offset Scheme (BOS) that aims to ensure there is no net loss of biodiversity values. The BOS will be triggered if the biodiversity assessment under the EP&A Act and BC Act determines a project is either:

- *Likely to result in a significant effect to any threatened species, or*
- *The clearance of native vegetation exceeds the minimum lot size, or*
- *The project will impact on area(s) mapped under the Biodiversity Values Map.*

A Biodiversity Strategy and Impact Assessment (**Appendix M**) has been prepared by Biosis to accompany this Master Plan Application. An assessment of the likelihood of threatened entities occurring within the study area is provided within Appendix 1 (flora) and Appendix 2 (fauna) of **Appendix M**.

As the areas of impact have been granted Biodiversity Certification, the Biodiversity Offsets Scheme (BOS) is not triggered.

5.4.2 Contaminated Land Management Act 1997

The general object of the *Contaminated Land Management Act 1997* (CLM Act) is to:

> *establish a process for investigating and (where appropriate) remediating land that the EPA considers to be contaminated significantly enough to require regulation under Division 2 of Part 3.*

A Ground Conditions Report and Detailed Master Plan Site Investigation was undertaken by ERM Pty Ltd (**Appendix T**). The assessment was undertaken in accordance with the Master Plan Site Auditor approved ERM (2021) Sampling and Analysis Quality Plan which was describe the Data Quality Objectives and to inform the Field Investigations for the Detailed Master Plan Site Investigation.

The key findings of the assessment found that the Master Plan Site is suitable for the for-land uses permitted under the National Environment Protection (Assessment of Master Plan Site contamination) HIL-A criteria. The proposal will include land uses such as mixed use and enterprise uses. This includes medium density to high density residential, commercial, light industrial, retail, hotel, childcare, community, and education all of which are permitted uses under the HIL-A.

A Contamination Report was undertaken by JBS&G (**Appendix AA**) which includes a Master Plan Site audit statement.

5.4.3 Heritage Act 1977

The purpose of the *Heritage Act 1977* is:

> *(a) to promote an understanding of the State's heritage,*
>
> *(b) to encourage the conservation of the State's heritage,*
>
> *(c) to provide for the identification and registration of items of State heritage significance,*
>
> *(d) to provide for the interim protection of items of State heritage significance,*
>
> *(e) to encourage the adaptive reuse of items of State heritage significance,*
>
> *(f) to constitute the Heritage Council of New South Wales and confer on it functions relating to the State's heritage,*
>
> *(g) to assist owners with the conservation of items of State heritage significance.*

Under the *Heritage Act 1977* (and subsequent amendments) historical archaeological relics, buildings, structures, archaeological deposits, and features with State heritage significant are protected and may be identified on the State Heritage Register (SHR) or by an active Interim Heritage Order.

A Statement of Heritage Impact (**Appendix S**) was prepared by Extent Heritage Pty Ltd to accompany this Master Plan Application. This Statement of Heritage Impact has determined that the study area is not identified as a heritage item on any statutory or non-statutory registers, nor does it meet the criteria for local or state significance.

The Statement of Heritage Impact has recommended mitigation measures in respect of the Kelvin Grove State Heritage Item which is not located on the Master Plan Site. Future development will need to consider the height, bulk, scale, and material of new buildings. Recessive colours, adequate setbacks, the use of open space and landscaping are ways which the impacts to this heritage item can be mitigated in future development.

The proposed works will not directly impact on any identified built heritage.

As the works will not directly affect any items on the Statement Heritage Register and there is low potential for any impacts on known or expected relics, no notifications, permits, or approvals are required in accordance with the Heritage Act 1977.

5.4.4 Rural Fires Act 1997

The purpose of the R*ural Fires Act 1997* is:

> *(a) for the prevention, mitigation, and suppression of bush and other fires in local government areas (or parts of areas) and other parts of the State constituted as rural fire districts, and*
>
> *(b) for the co-ordination of bush firefighting and bush fire prevention throughout the State, and*
>
> *(c) for the protection of persons from injury or death, and property from damage, arising from fires, and*
>
> *(c1) for the protection of infrastructure and environmental, economic, cultural, agricultural and community assets from damage arising from fires, and*
>
> *(d) for the protection of the environment by requiring certain activities referred to in paragraphs (a)–(c1) to be carried out having regard to the principles of ecologically sustainable development described in section 6 (2) of the Protection of the Environment Administration Act 1991.*

Section 4.46 of the EP&A Act and Section 100B of Rural Fires Act 1997 require authorisation in respect of bush fire safety of subdivision of land that could lawfully be used for residential or rural residential purposes, or development of land for special fire protection purposes.

A Bushfire Assessment Report **(Appendix Y**) has been prepared in support of this application. The report assesses the capacity of the proposed Master Plan in providing minimum bushfire protection necessary to ensure safety of the future occupants. The report confirms the proposed Master Plan achieves the relevant performance criteria provided in Planning for Bushfire Protection 2019.

5.4.5 National Parks and Wildlife Act 1974

The purpose of the *National Parks and Wildlife Act 1974* is to ensure:

> *(a) the conservation of nature, including, but not limited to, the conservation of —*
>
> > *(i) habitat, ecosystems, and ecosystem processes, and*
> >
> > *(ii) biological diversity at the community, species, and genetic levels, and*
> >
> > *(iii) landforms of significance, including geological features and processes, and*
> >
> > *(iv) landscapes and natural features of significance including wilderness and wild rivers,*
>
> *(b) the conservation of objects, places, or features (including biological diversity) of cultural value within the landscape, including, but not limited to —*
>
> > *(i) places, objects, and features of significance to Aboriginal people, and*
> >
> > *(ii) places of social value to the people of New South Wales, and*

(iii) places of historic, architectural, or scientific significance,

(c) fostering public appreciation, understanding and enjoyment of nature and cultural heritage and their conservation,

(d) providing for the management of land reserved under this Act in accordance with the management principles applicable for each type of reservation.

The *National Parks and Wildlife Act 1974* (NPW Act) protects Aboriginal heritage (places, Master Plan Sites, and objects) within NSW. Protection of Aboriginal heritage is outlined in Section 86 of the NPW Act.

An Aboriginal Cultural Heritage Assessment Report (ACHAR) (**Appendix U**) has been prepared in support of this application. Refer to **Section 12.1.7** for a summary of the ACHAR.

5.5 Western Sydney Aerotropolis Precinct Plan

The Aerotropolis Precinct Plan provides the place-based objectives and requirements to guide development in the Aerotropolis in a consistent and sustainable manner over time. This Plan sets out the finer grain detail to support the land use zoning and other provisions of the Aerotropolis SEPP.

The provisions of this Aerotropolis Precinct Plan include objectives and requirements which must be addressed in the assessment of a development application. The consent authority will determine if a development application is consistent with the Aerotropolis Precinct Plan based on an assessment of compliance with the requirements, and with reference to the relevant objectives.

The Master Plan seeks amendments to the Aerotropolis Precinct Plan which provide for a superior urban design and planning outcomes through the proposed amendments. These amendments are justified as they would achieve the superior outcome than what could have been achieved through strict compliance with Aerotropolis Precinct Plan.

Refer to **Appendix II** for an assessment of the Master Plan Application against the Western Sydney Aerotropolis Precinct Plan.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

5.6 Western Sydney Aerotropolis Development Control Plan Phase 2

The Western Sydney Aerotropolis Development Control Plan – Phase 2 (Phase 2 DCP) was finalised on 10 November 2022. It supports the implementation of the Aerotropolis Precinct Plan by providing controls to guide development across the initial precincts in the Aerotropolis.

The Phase 2 DCP contains specific development controls to support healthy communities, high-quality building design, construction standards, stormwater management, vegetation and canopy cover, and heritage and environmental conservation.

The Master Plan seeks amendments to the Phase 2 DCP through a Site-Specific Development Controls document (referred to as the Bradfield Master Plan). It is envisaged that the Site-Specific Development Controls (**Appendix A**) will form part of the Phase 2 DCP through the form as a schedule amendment. The justification for the proposed amendments to the Phase 2 DCP are:

- The Bradfield Master Plan will complement and expand on the existing controls by providing place-based development controls to guide future development in Bradfield City Centre. This includes alternative benchmark solutions and additional controls to those in the Phase 2 DCP.
- The proposed amendments to the Phase 2 DCP will not set a precedent in the Aerotropolis as the outcome is restricted to the Bradfield City Centre - Master Plan site within the commercial core/ mixed use which is identified within the Precinct Plan as the primary centre of the Aerotropolis and a core metropolitan centre.
- The proposed new controls are appropriate given the nature of the site. The site is the core of all Aerotropolis activities, and the proposed new controls respond to the vision of a new city centre development and encourage the delivery of high-density urban forms and land uses envisioned under the Precinct Plan.

Overall, the new controls proposed align with the strategic intent of the Aerotropolis Precinct, achieve the original objectives of the Phase 2 DCP and are compatible with the context and future character of the site.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

Refer to **Appendix JJ** for an assessment of the Master Plan Application against the Phase 2 DCP.

6 Overview of what is proposed for approval under the Master Plan

The Master Plan seeks approval for the following elements, under the Western Parkland City SEPP, Clause 4.41:

- Master Plan including:
  - Objectives and Master Plan diagrams.
  - Designing with Country.
  - Master Plan Values being Green, Travel, Connect and Dream.
  - Development controls, land use and built form and building design including:
    - Floor space distribution.
    - Steet setbacks, activation and Steet wall heights.
    - Building footprints and Solar access.
    - Building materiality.
  - Movement including:
    - Pedestrian network and Cycling Network.
    - Public transport network.
    - Street types.
  - Public domain and public open space including:
    - Key City Spaces and Open space provision.
    - Parks and green walkways including Central Park, Ridge Park, City Walk West, City Walk East, Green loop, Local parks, City Parkland West, City Parkland East, and Parklands Waterfront Promenade.
- Design Excellence Strategy
- Exempt and Complying provisions.

The Master Plan does not propose permanent development in the existing 60m wide Special Purposes 2 (SP2) Infrastructure Zone corridor. A decision regarding future rail infrastructure in the corridor is the subject of review by Government.

These elements are provided in detail within the Master Plan Report at **Appendix A,** Design Excellence Strategy at **Appendix D** and the Exempt and Complying Development Code at **Appendix F.**

The Master Plan in addition seeks approval for the amendments to the following:

- *State Environmental Planning Policy (Precincts- Western Parkland City) 2021* (Western Parkland City SEPP).
- Western Sydney Aerotropolis Precinct Plan
- Western Sydney Aerotropolis Development Control Plan Phase 2 (Phase 2 DCP)

These elements are provided in detail within the Master Plan Report at **Appendix A** and the detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP which is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**. **Section 7** provides a succinct summary of the Master Plan.

7 Intent of the Master Plan

7.1 Proposed Vision

The key vision of the Master Plan is:

> *Bradfield city centre is a 24/7 ecosystem of culture, creativity, and innovation in a living landscape of inspiration and experience. Here, ambition and opportunity come together in new ways to dream and deliver an extraordinary future for the people of Western Sydney and beyond. A future defined by our rich Indigenous culture and shared Australian identity; by proud storytelling, respected heritage, and connection to country.*
>
> *A future of bolder ideas and innovation fuelled by free-flowing knowledge and collaboration. A future of net zero footprints and smarter ways for people, the environment, and business to thrive together. Underpinned by ideals of diversity and inclusivity, progress and reflection, prosperity and sustainability, Bradfield city centre is a million futures waiting to be written.* – Urban Design Report, **Appendix B**.

7.2 Purpose of Bradfield City Centre Master Plan

This Master Plan Application does not seek approval for any current or future development/works. Any future development will be subject to individual applications and do not form part of this Master Plan Application.

The Master Plan enhances the Aerotropolis Precinct Plan as it applies to Bradfield City Centre to deliver the vision and Master Plan objectives. The Master Plan provides a detailed framework and design guidance for future development applications within the Master Plan Site.

It seeks to refine the Aerotropolis Precinct Plan by delivering approximately 10,000 residential dwellings and 24, 000 jobs up to and beyond 2056, providing more open space and green space, improving connectivity and legibility, identifying, and retaining significant views and sustaining the importance of Connections with Country.

The Master Plan includes the following:

- Master plan for key development parameters including indicative height of buildings, floorspace distribution, street layout, street wall height and setbacks.
- Design excellence strategy
- Exempt and complying development code provisions.
- Amendments to the following:
    - *State Environmental Planning Policy (Precincts- Western Parkland City) 2021* (Western Parkland City SEPP).
    - Western Sydney Aerotropolis Precinct Plan
    - Western Sydney Aerotropolis Development Control Plan Phase 2.

The WPCA has prepared a Master Plan (**Figure 12** and **Figure 13** below) in accordance with the DPE Master

Plan Requirements. The Master Plan sets out a framework for future development within Bradfield City Centre which includes:

- Road network, key connectors to adjoining land and the regional road network (existing and future).
- Block structure.
- Indicative open space network.
- Sustainability strategy.
- Social and infrastructure strategy.
- Arts and culture strategy.
- Infrastructure servicing strategy.

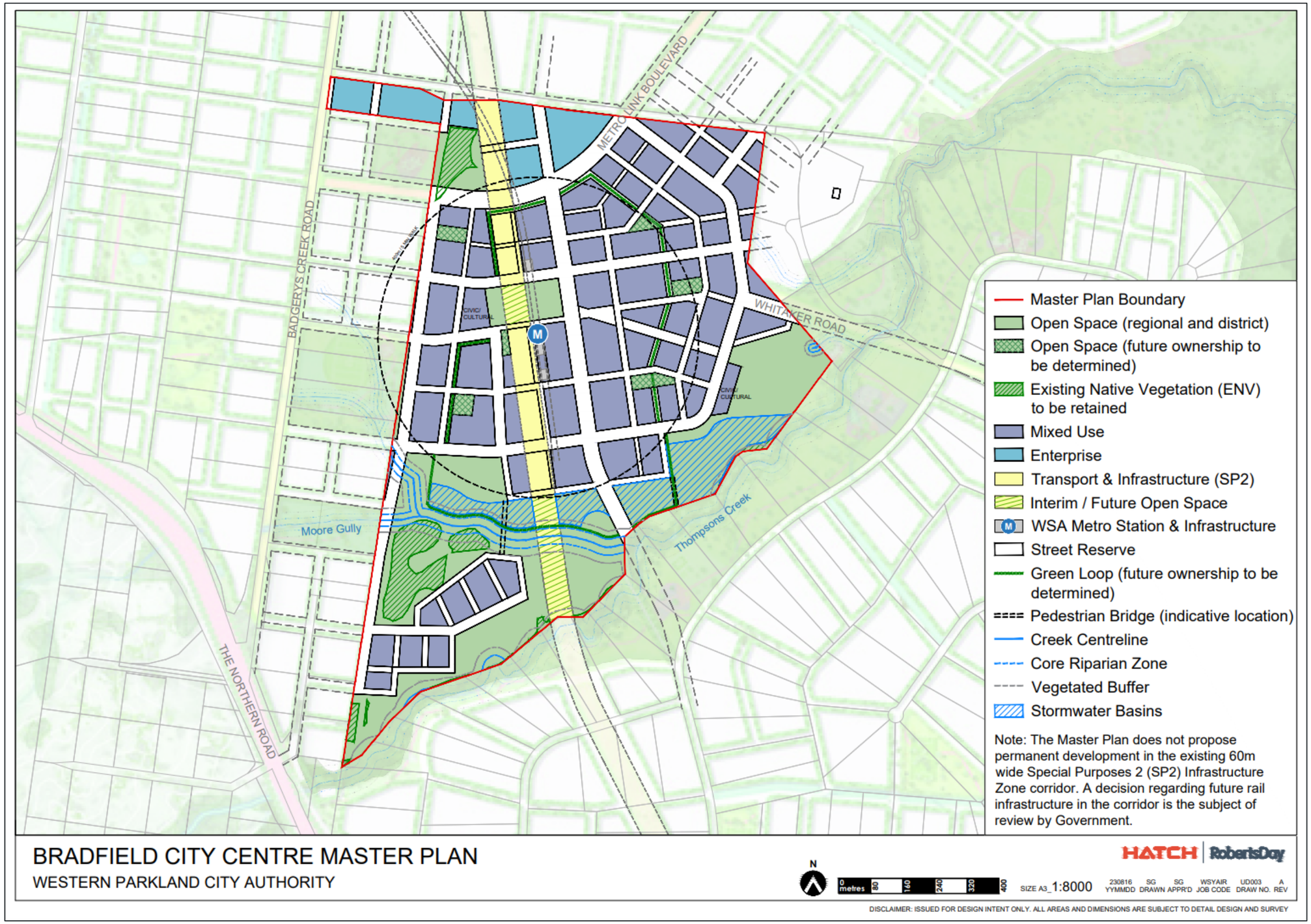
The Master Plan does not propose permanent development in the existing 60m wide Special Purposes 2 (SP2) Infrastructure Zone corridor. A decision regarding future rail infrastructure in the corridor is the subject of review by Government.

Figure 11 provides an indicative concept image of Bradfield City Centre. **Figure 12** and **Figure 13** provides the Bradfield City Centre Master Plan.

Figure 11 Indicative concept image of Bradfield City Centre

Source: Hatch Roberts Day – Bradfield City Centre – Master Plan Report

Figure 12 Bradfield City Centre Master Plan



Source: Hatch Roberts Day – Bradfield City Centre – Master Plan Report

Figure 13 Bradfield City Centre Illustrative Master Plan

Source: Hatch Roberts Day – Bradfield City Centre – Master Plan Report

7.2.1 Planning & Development Horizons

The Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons for technical assessments which is provided in **Table 12**.

Table 12 - Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

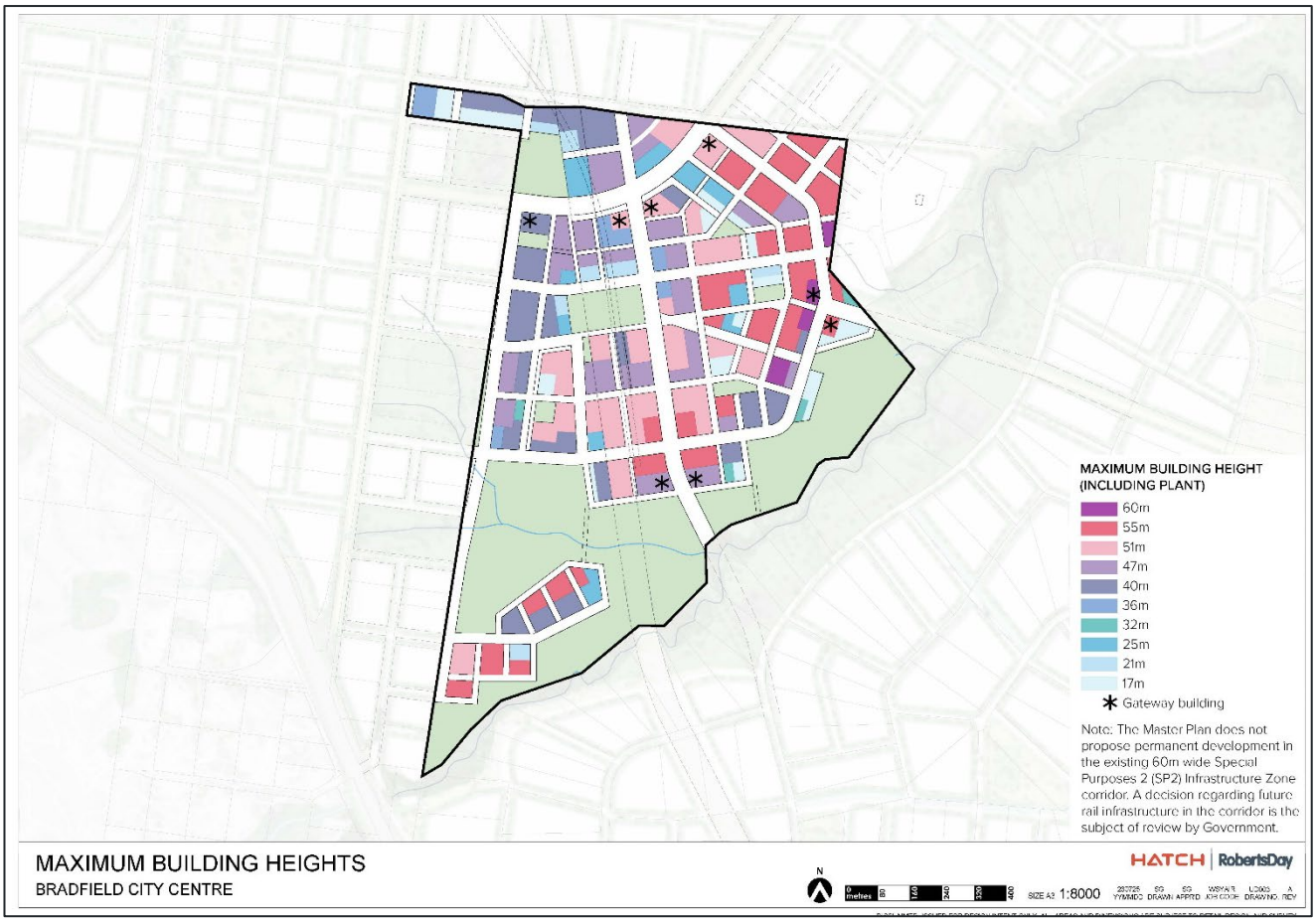
7.2.2 Indicative Height of Buildings

Under the Aerotropolis Precinct Plan a maximum height of buildings of 62m is established across Bradfield City Centre. The Master Plan has been developed using the following parameters:

- A maximum height based on RL 125.25 OLS.
- Providing a built form envelope that allows for a minimum 3 hours of direct sunlight between 9am and 3pm on the 21st of June. This also allows for direct sunlight to a moving 70% area of open space to District & Regional Parks and 50% area to Local Parks.
- Providing a varied skyline that highlights key corners of Master Plan Sites.

Indicative building heights above natural ground level are shown on **Figure 14** below. Variations to height may be justified subject to the maximum height in the Aerotropolis Precinct Plan, meeting the objectives of this Master Plan and compliance with the PANS-OPs.

Figure 14 Indicative Building Height Distribution



Source: Hatch Roberts Day – Bradfield City Centre Master Plan

7.2.3 Maximum permissible Floor Space

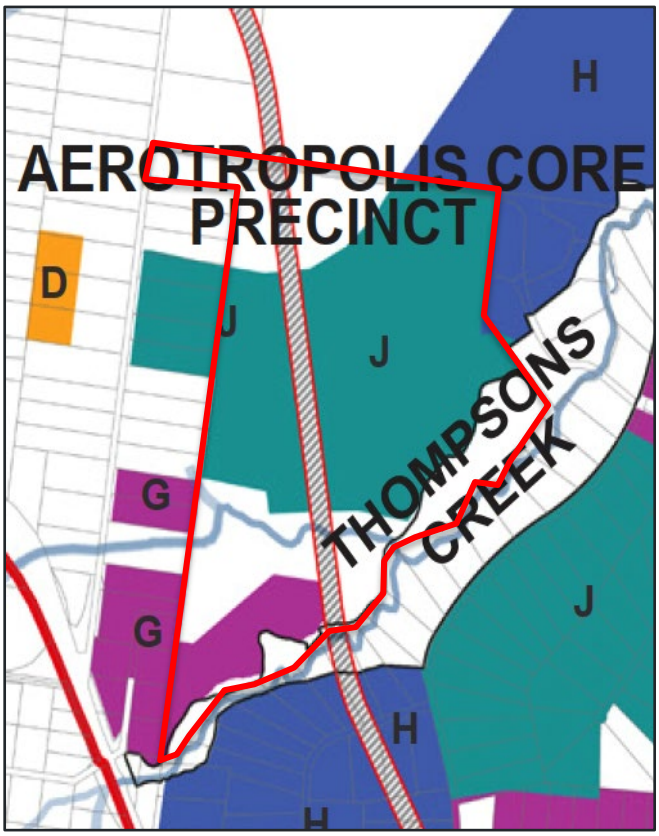
The Master Plan does not seek to amend the Aerotropolis Precinct Plan Floor Space Ratio which applies to the Master Plan Site. The Floor Space Ratio which applies to the Master Plan Site is provided within **Table 13**.

Table 13 – Floor Space Ratio

Area		Land Area within Bradfield City Centre	FSR in Precinct Plan	Maximum Permitted GFA
	Mixed Use (Area J)	597,128	3.5:1	2,089,948 sqm
	Mixed Use (Area H)	1,736	3.0:1	5,208 sqm
	Mixed Use (Area G)	1,736	2.5:1	221,250 sqm
	Total Maximum Permitted GFA in Mixed Use Zone			2,316,000 sqm (Approximately – Rounded to the nearest thousand)

Figure 15 outlines the Aerotropolis Precinct Plan Floor Space Ratio which applies to the Master Plan Site.

Figure 15 Precinct Plan Floor Space Ratio

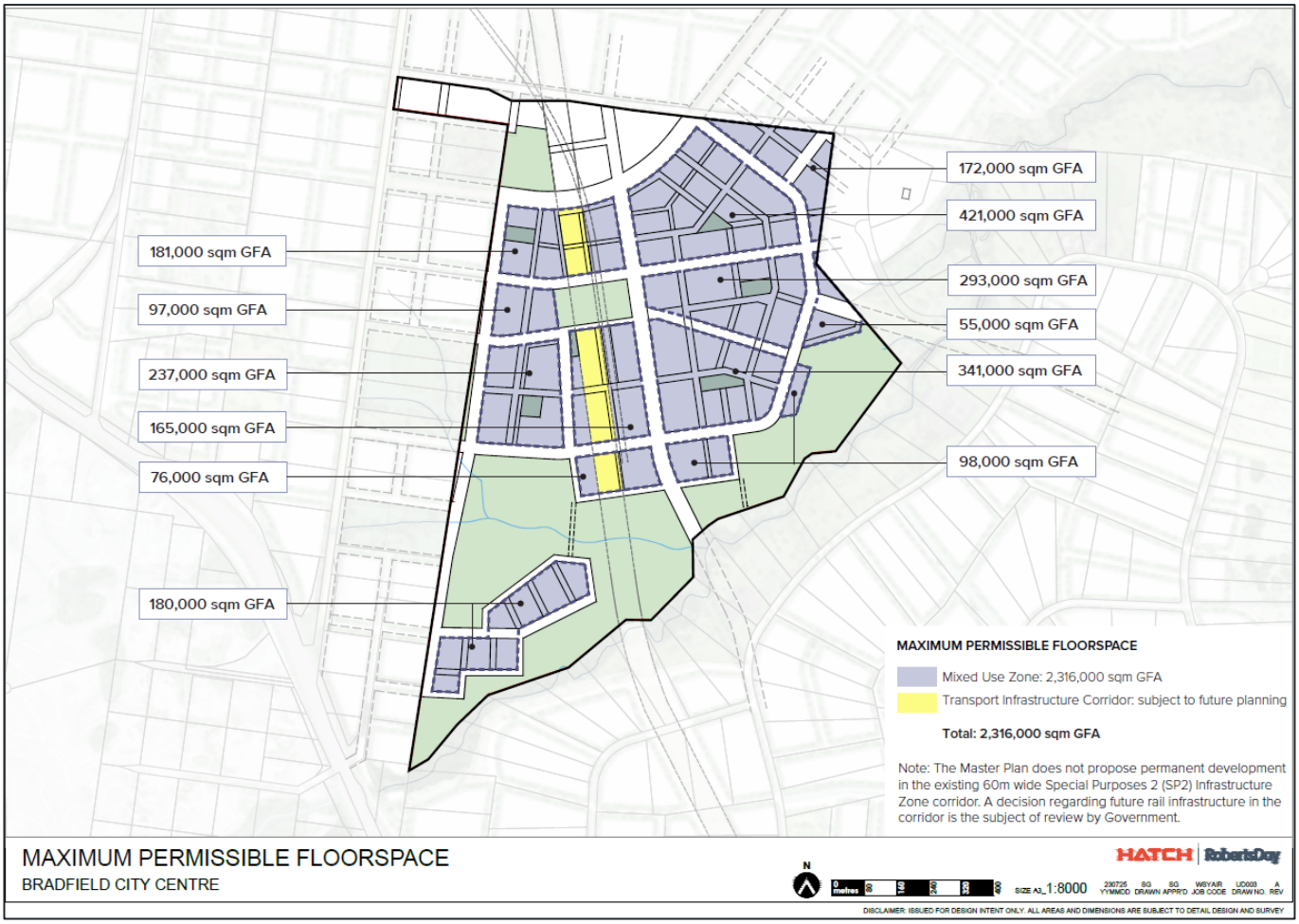


Source: Aerotropolis Precinct Plan

The maximum permissible gross floor area of individual development sites is defined on the **Figure 16**.

Any future development application is required to demonstrate how development is consistent with the GFA allocation. Where a development application applies to only part of a development site shown on the floor space allocation figure, the development application is to detail how floorspace will be allocated across the development site and demonstrate that the cumulative floor space allocation will not be exceeded.

Figure 16 Maximum Permissible Floorspace



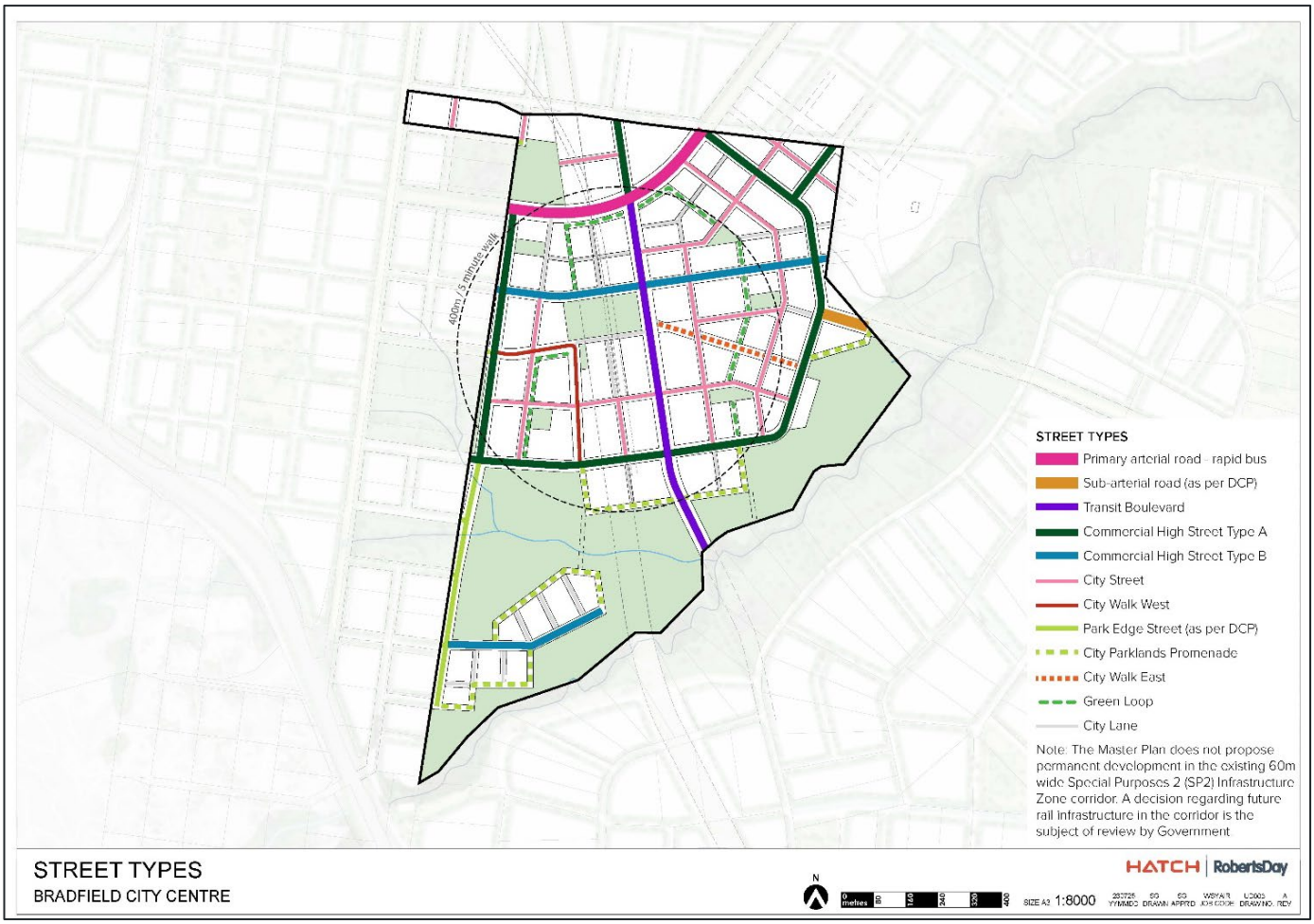
Source: Hatch Roberts Day – Bradfield City Centre Master Plan

7.2.4 Street Hierarchy

The Master Plan refines a number of street sections and has provided additional street types. The street types and street sections are detailed in the Master Plan Report at **Appendix A** and Urban Design Report at **Appendix B**.

The street hierarchy is shown on **Figure 17** below.

Figure 17 Street Hierarchy



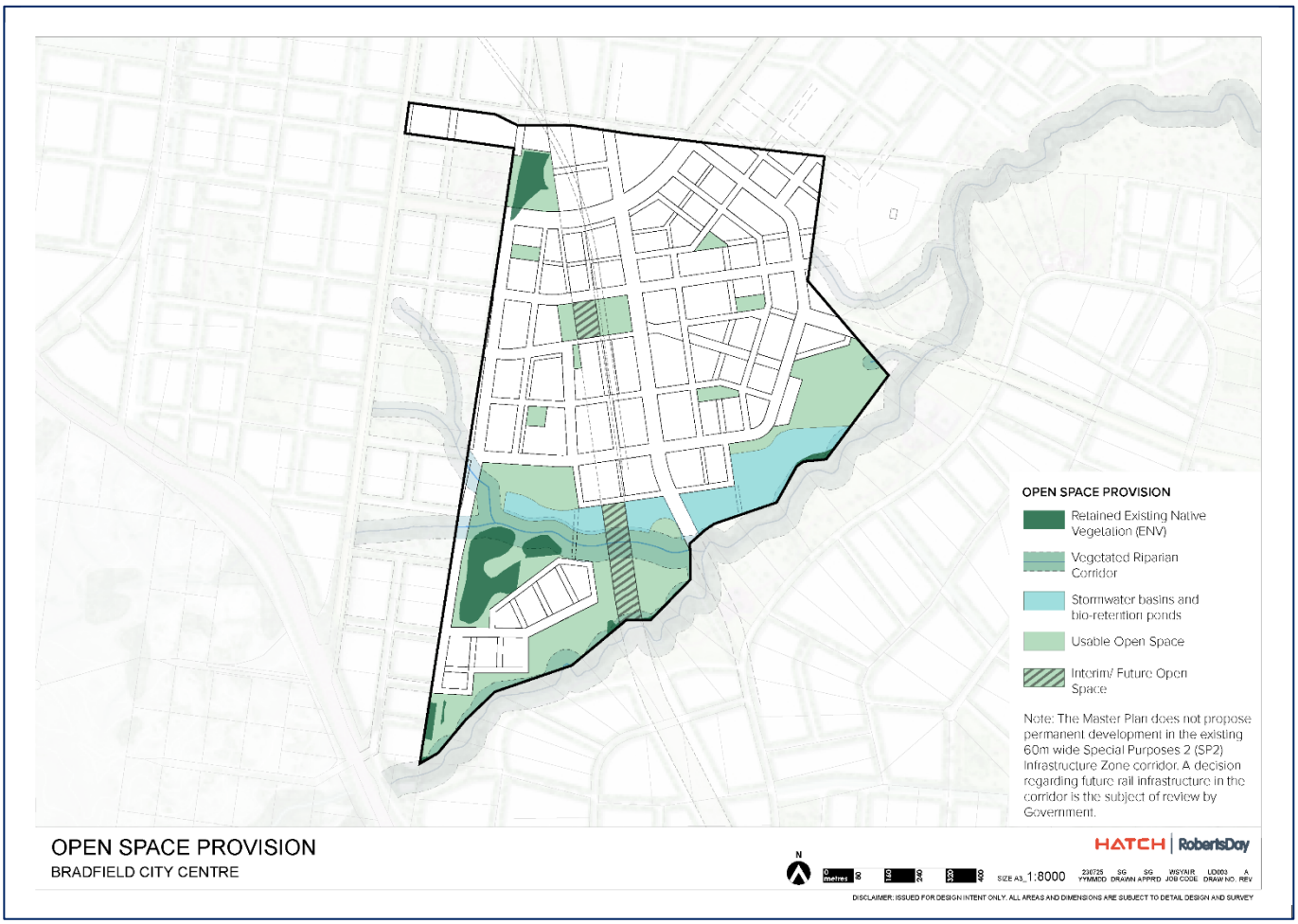
Source: Hatch Roberts Day – Bradfield City Centre Master Plan

7.2.5 Open Space Provision

The Master Plan provides 31% or 35.8 ha of the entire Master Plan Site area as open space including *Environment and Recreation Zone (ENZ)*, *Existing Native Vegetation (ENV)*, Thompsons Creek riparian corridor, a new Central Park, Moore Gully and district and local parks. The Master Plan provides enhanced and new open space areas what was included within the Aerotropolis Precinct Plan.

The Open Space provision is shown on **Figure 18** below.

Figure 18 Open Space provision



Source: Hatch Roberts Day – Bradfield City Centre Master Plan

8 Design Excellence

The Western Parkland City SEPP, Part 4.5 Design Excellence applies to the Master Plan Site. The objective of Part 4.5 of the Western Parkland City SEPP is to ensure development in the Western Sydney Aerotropolis is consistent with the policy titled Better Placed, published by the Government Architect NSW in May 2017, and delivers the highest standard of architectural, urban and landscape design.

Pursuant to Clause 4.30 of the Western Parkland City SEPP, Part 4.5 of the SEPP does not apply to development on land to which a master plan applies if the consent authority is satisfied that the master plan adequately provides for assessment of the design quality of the development. As part of the master plan application, a Design Excellence Strategy (**Appendix D**) has been prepared and provides for the assessment of design quality for future development on the site.

The Design Excellence Strategy identifies objectives and controls, provides guidance, and outlines the principles that will be followed during each stage of the Master Plan delivery program. This will ensure that the architectural and urban design of future development achieves design excellence and positively contributes to the broader Aerotropolis Planning Framework.

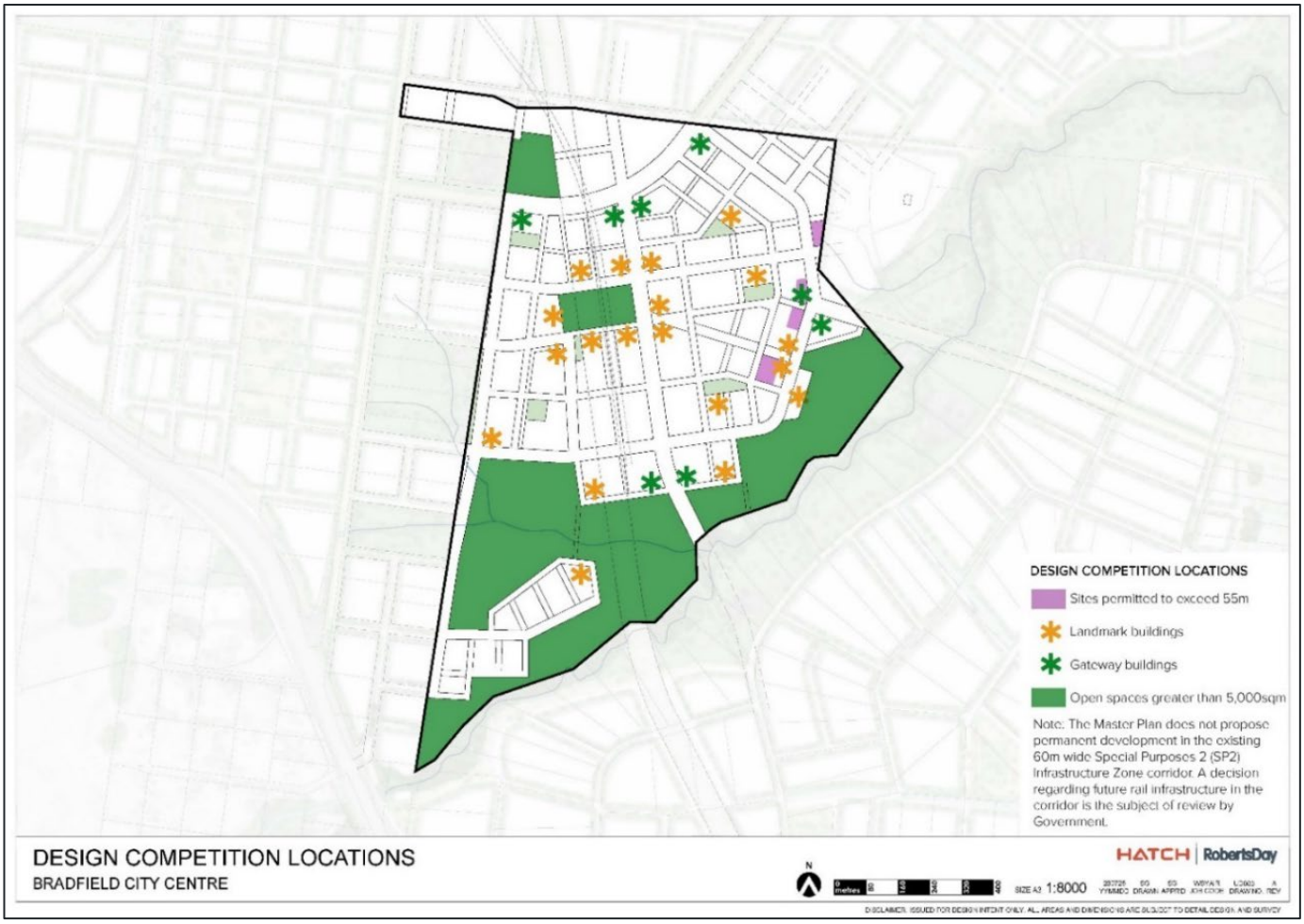
The Design Excellence Strategy sets out an alternative design excellence approach that is consistent with Parramatta CBD and the Sydney CBD. In addition, the strategy nominates key locations and Gateway and Landmark Sites that will be subject to a design competition (refer to **Figure 19** below).

A summary of the Design Excellence Strategy is provided below.

Table 14 – Design Excellence Approach

Development Application Category	Design Excellence Approach
• Development Applications with buildings over 55 metres; or • Open spaces greater than 5,000sqm as defined on the Design Competition Locations Map; or • Landmark buildings as defined on the Design Competition Locations Map; or • Gateway buildings as defined on the Design Competition Locations Map over $100 million capital investment value; or • Public buildings (e.g., community and cultural facilities excluding minor development); or • Where a design competition is chosen by the applicant.	• Architectural Design Competition in accordance with the Draft Government Architect's Design Excellence Competition Guidelines, 2018.
• Development not exceeding 55 metres and over $30 million in capital investment value. • Gateway buildings as defined on the Design Competition Locations Map between $30 - $100 million capital investment value.	• Consideration by State Design Review Panel.
• Development Applications below 55 metres and having: • capital investment value $30 million or less • a Master Plan Site area of at least 10,000sqm • a height of 3 or more storeys above ground level.	• Consideration by Design Review Panel.

Figure 19 Design Competition Location



Source: WPCA –Design Excellence Strategy

This proposed strategy addresses Clause 4.30 of the Western Parkland City SEPP as includes design excellence objectives and controls that will guide the design quality of future development across the Master Plan Site and provide an alternative approach that will ensure the highest standard of architectural, urban and landscape design is achieved.

9 Exempt and Complying Development

Bradfield City Centre Exempt and Complying Development Strategy (**Appendix E**) sets out the proposed approach to exempt and complying development within Bradfield City Centre. It addresses Master Plan Requirements issued by DPE and requirement nine which requires preparation of an exempt and complying code.

Exempt and complying development controls are currently set out in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* (Codes SEPP). The *State Environmental Planning Policy (Precincts – Western Parkland City) 2021* (Western Parkland City SEPP) currently establishes which provisions of the Codes SEPP apply to the Western Sydney Aerotropolis.

Section 41 of the Western Parkland City SEPP allows the Minister for Planning to approve a master plan that applies to land within the Aerotropolis. It also sets out that a master plan must specify the particular development that may be carried out as complying development on the land to which the master plan applies. Accordingly, this document has been prepared to support the Bradfield City Centre Master Plan.

Under the Bradfield Master Plan, it is proposed to allow change for use for a specified purposes in relation to an existing approved building on land in the MU1 Mixed Use zone or the ENT Enterprise Zone in Bradfield City Centre as complying development subject to the development standards set out in the Bradfield City Centre Master Plan document.

Additionally, changes are proposed to the exempt development provisions which apply to Bradfield City Centre under the Codes SEPP to provide for greater flexibility for early activation of the centre and enable special events and the use of the land for ongoing community and cultural events / activities. The amended exempt development provisions are proposed to be included in the Western Parklands City SEPP including for:

- Temporary Events Signs.
- Tents, marquees, or booths for community events.
- Tents, marquees used for filming purposes and private functions.
- Stages or platforms for private functions.
- Stages or platforms for community events.
- Major events Master Plan Site – additional temporary development (which currently apply to other major events sites such as Darling Harbour, The Rocks, Sydney Olympic Park and Barangaroo)

These exempt development provisions would apply to the Enterprise zone, Mixed Use zone (including land reserved for local open space and drainage) and the Major Infrastructure Corridor (in consultation with TfNSW and Sydney Metro), in Bradfield City Centre, but not apply to land identified for environmental conservation purposes (ENZ zones). This is consistent with the approach which currently applies to other exempt development in the Aerotropolis.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**. A summary of the justification for the proposed amendments are included within **Section 10**. Overall, the proposed amendment achieves a better planning outcome and will allow for the activation and development of the Master Plan Site.

10 Justification for proposed amendments to the Western Parkland City SEPP

The Master Plan seeks amendments to the statutory planning context including:

- Western Parkland City SEPP:
  - Chapter 4, Part 4.6, Division 2 Exempt development
  - Land Reservation Acquisition Map – Sheet LRA_001.

A detailed request to amend the Western Parkland City SEPP is provided within the Explanation of Intended Effect at **Appendix GG.**

Overall, the proposed amendments achieve a better planning outcome for the Master Plan Site.

In summary the justification for the proposed amendments is:

- The Master Plan provides for a superior urban design outcome.
- Would allow for better planning and built form outcomes to be delivered on the Master Plan Site.
- Represents the actual ground conditions and will deliver more sustainable design outcome for the Master Plan Site.
- Have been determined based on extensive design and testing on the outcomes and minimisation of potential impacts.
- The master planning process has allowed for an iterative design process which has allowed for the improvement and refinement of the Aerotropolis Precinct Plan and Phase 2 DCP.
- The proposed amendments are consistent with the objectives of the Western Parkland SEPP and the Aerotropolis Precinct Plan.
- The proposed amendments are consistent with the Master Plan Guidelines as the guidelines provide that the Master Planning process may proposed a concurrent amendment to the Western Parkland City SEPP.
- The proposed amendment is consistent with the Master Plan Guidelines in that it proposes an amendment to the Aerotropolis Precinct Plan to achieve a superior planning outcome but is consistent with the Aerotropolis Planning Framework.
- These proposed amendments allow for enhanced planning outcomes across the Master Plan Site, because of the detailed analysis and the fine grain site-specific design process which has been undertaken during the preparation of the Master Plan.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

10.1 Justification for proposed Western Parkland City SEPP Amendments

During the preparation of the Master Plan, proposed changes to the Western Parkland City SEPP were discussed and refined as part of the TAP process.

The amendments which are proposed as part of the Master Plan have undergone a process of responding to technical considerations and advice from the TAP.

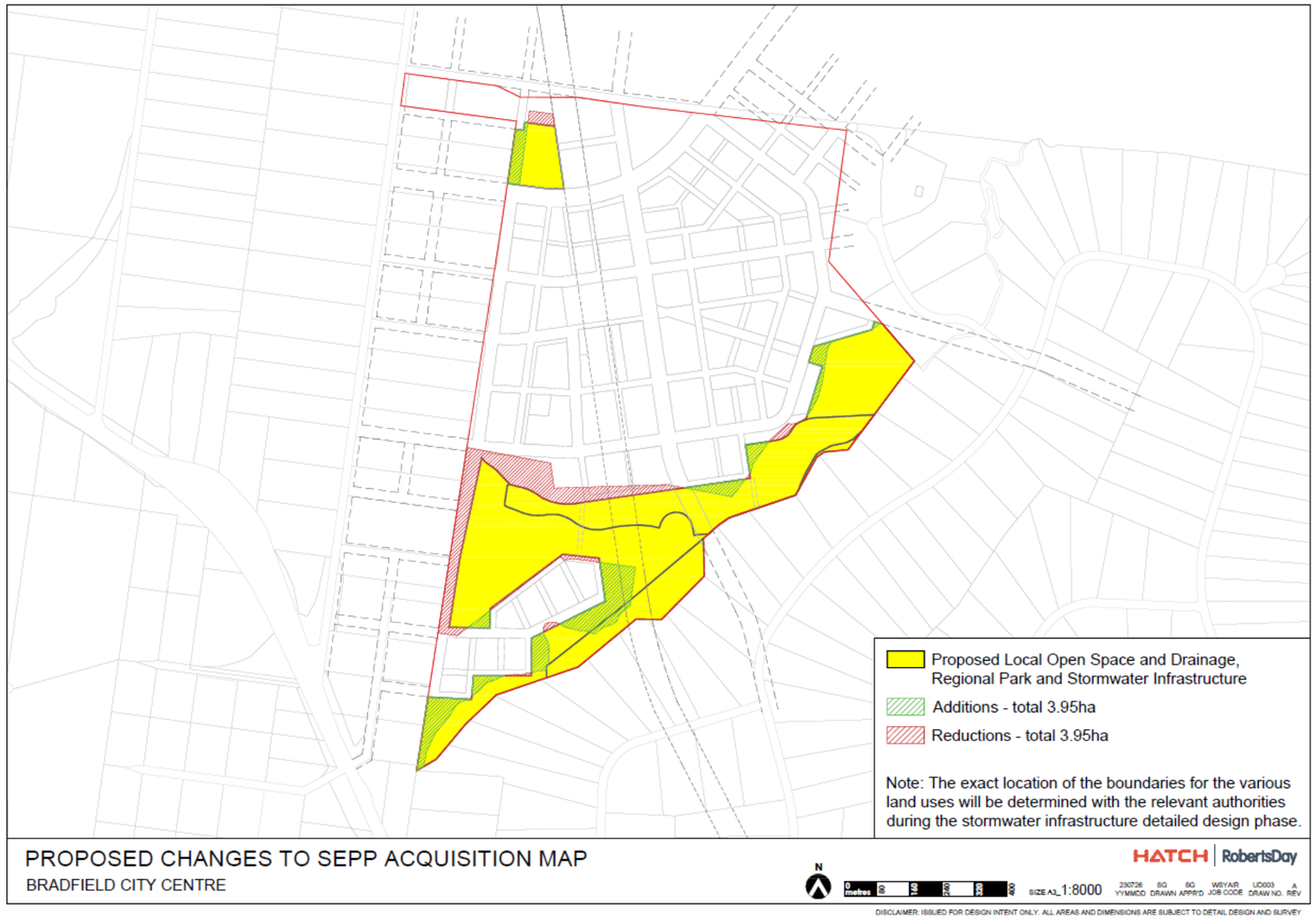
This process allowed for the TAP to provide consolidated and collaborative feedback on the proposed amendments prior to the submission of the Master Plan to DPE for statutory assessment.

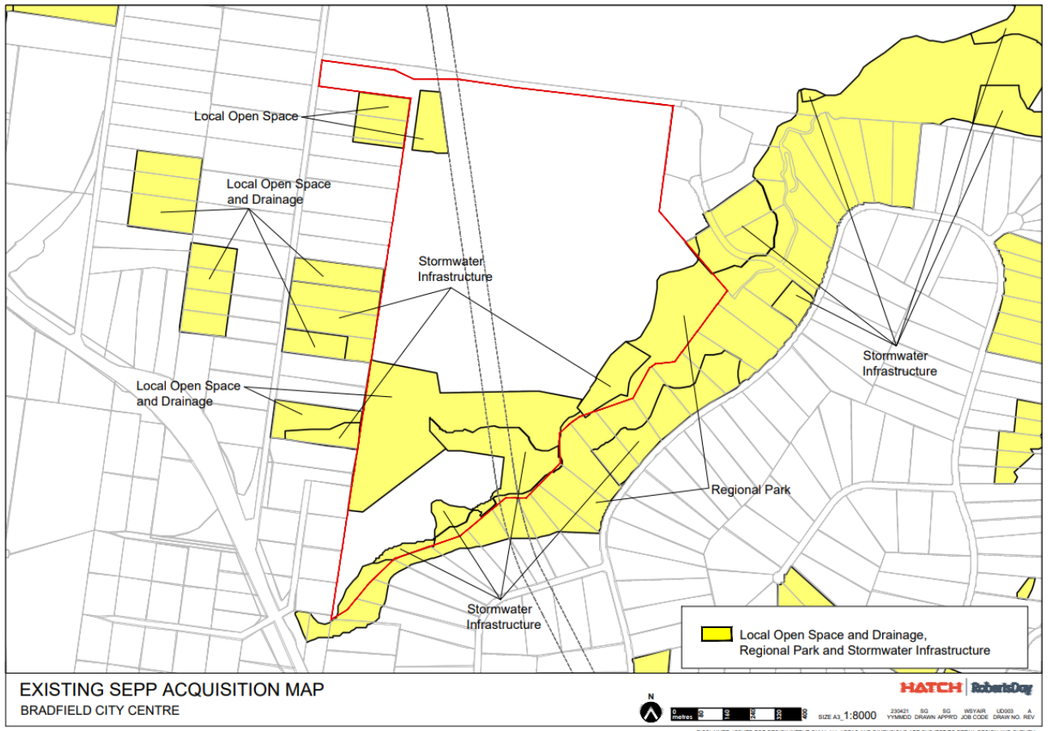
10.1.1 Western Parkland City SEPP – Land Reservation Acquisition Map – Sheet LRA_001.

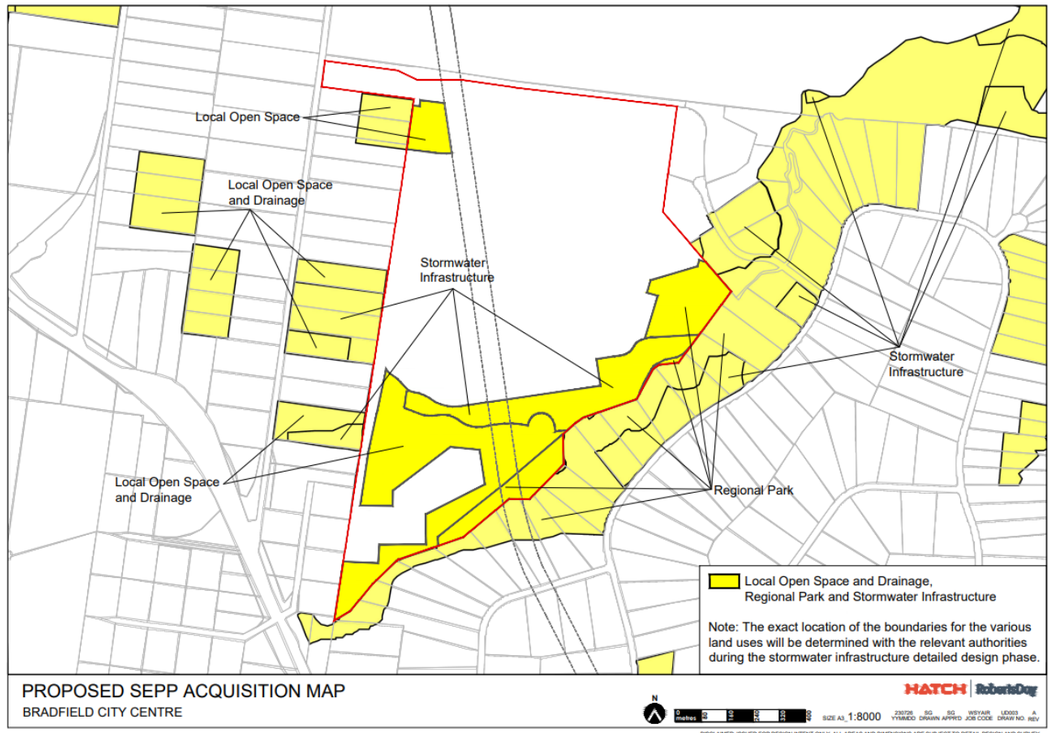
The Master Plan proposes amendments to the Western Parkland City SEPP, these proposed amendments are included within **Table 15**.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

Table 15 – Proposed Western Parkland City SEPP Amendments

Western Parkland City SEPP Amendments	
Map Reference: State Environmental Planning Policy(Precincts—Western Parkland City)2021 Land Reservation Acquisition Map—Aerotropolis - Sheet LRA_001	**Justification**
	**Maps provided:** — Proposed Changes to SEPP Acquisition Map. — Existing SEPP Acquisition Map. — Proposed SEPP Acquisition Map. **Note:** The road along the western boundary of the Master Plan Site has been excluded from the proposed open space area notwithstanding the road's existence within the Aerotropolis Precinct Plan. **Explanation of change:** To amend the acquisition boundaries to reflect the master plan design for Ridge Park and Moore Gully and Thompsons Creek and the proposed stormwater management. These variations enable the implementation of the proposed open space and landscaping framework on the Master Plan Site and to ensure right amount of stormwater infrastructure and high biodiversity value land is protected. The proposed change to the SEPP Land Reservation Acquisition Map denotes that there is the following proposed Land Reservation redistribution: ○ Additions: Total 3.95 ha. ○ Reductions: Total 3.95ha. These proposed amendments in effect redistribute the areas for acquisition across the Master Plan Site in the right locations. There is no net addition or reduction in total area for land acquisition. These variations have been determined through the extensive ground truthing and master planning process which has been undertaken.





Justification for change:

- Ridge Park is proposed to be connected to the open space identified adjoining the western boundary to create a larger contiguous park.
- Stormwater basins are required on the northern side of Moore Gully to capture, treat, and manage stormwater from the catchment prior to entering Moore Gully and Thompsons Creek.
- The proposed stormwater area is the same size as shown in the Aerotropolis Precinct Plan and has been designed and tested to meet technical requirements.
- The proposed stormwater management system integrates considerations for recreation, ecology, waterway health and flooding in line with the Parkland City vision set out in the Aerotropolis Precinct Plan.
- The total areas for acquisition of local open space, stormwater and regional park are the same as the existing Western Parkland City SEPP areas.
- Ensures that the open space on the Master Plan Site and high biodiversity value land is protected.
- There is no total net addition or reduction that results in less or more land being identified for acquisition.
- The proposed amendment is consistent with the Western Parkland City SEPP, Chapter 4, Part 4.8, Section 4.50 in that it has helped identify areas that will be acquired for certain public purposes if the land is required to be acquired.
- The proposed amendment is consistent with the Master Plan Guidelines as the guidelines provide that the Master Planning process may proposed a concurrent amendment to the Western Parkland City SEPP.
- This proposed amendment allows for a superior planning outcome to be provided across the Master Plan Site for the above-mentioned reasons.

Outcome from proposed amendment:

- Allows for a Larger Ridge Park to be provided.
- Provides for a superior stormwater management that integrates recreation, ecology and water management and achieves technical requirements in line with the Aerotropolis Precinct Plan.
- There will be no net addition or reduction in land area for acquisition. There will be no additional responsibility or cost attributed to the respective acquisition authority.

10.1.2 Justification for proposed amendments to Western Parkland City SEPP- Exempt Development

A new section is proposed to be added to Part 4.6, Division 2 Exempt Development of the Western Parkland City SEPP to set out additional provisions for exempt development for Bradfield City Centre for the following uses:

- Temporary Events Signs
- Tents, marquees, or booths for community events
- Tents, marquees used for filming purposes and private functions
- Stages or platforms for private functions
- Stages or platforms for community events
- Major events site – additional temporary development.

Provisions relating to these types of development currently exist with Part 2, Division 2 (Advertising and Signage Exempt Development Code) and Part 2, Division 3 (Temporary Uses and Structures Exempt Development Code) of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* (Codes SEPP). These provisions are proposed to be incorporated in Part 4.6, Division 2 of the Western Parkland City SEPP with a number of variations as discussed below.

A number of variations are sought to the exempt development standards for temporary events signs, tents / marquees, and stages as they apply to Bradfield City Centre to provide greater flexibility for early activation of the centre and enable special events and the use of the land for ongoing community and cultural events/ activities. The proposed variations to these development standards are detailed and justified within Bradfield City Centre Master Plan Exempt and Complying Development Strategy.

The provisions relating to additional temporary development for Major Events site which currently apply to sites such as Darling Harbour, The Rocks, Sydney Olympic Park, and Barangaroo under the Codes SEPP are proposed to be expanded to apply to Bradfield City Centre. This would allow for major temporary events to be carried out at Bradfield City Centre as exempt development consistent with current provisions for other major events sites.

The proposed exempt development provisions would apply to the Enterprise zone, Mixed Use zone (including land reserved for local open space and drainage) or the Major Infrastructure Corridor (in consultation with Transport for NSW and Sydney Metro), in Bradfield City Centre. This is consistent with the approach which currently applies to other exempt development in the Aerotropolis.

11 Justification for proposed amendments to the Western Sydney Aerotropolis Precinct Plan and Phase 2 DCP

The Master Plan proposes amendments to the Western Sydney Aerotropolis Precinct Plan and Western Sydney Aerotropolis Development Control Plan Phase 2.

The proposed amendments are as follows.

- Western Sydney Aerotropolis Precinct Plan March 2022
  - Land Use and Structure Plan (Figure 3)
  - Blue – Green Infrastructure Framework (Figure 5)
  - Total Water Cycle Management (Figure 6)
  - Transport Network (Figure 8)
  - Active Transport Network (Figure 9)
  - Street Hierarchy Map (Figure 10)
- Western Sydney Aerotropolis Development Control Plan Phase 2 (Phase 2 DCP)
  - Amendment to include Bradfield City Centre Master Plan – Site Specific Development Controls as part of the Aerotropolis DCP.

A detailed request to amend the Western Sydney Aerotropolis Precinct Plan and Phase 2 DCP is provided within Discussion Paper at **Appendix HH**.

11.1 Proposed Aerotropolis Precinct Plan Amendments

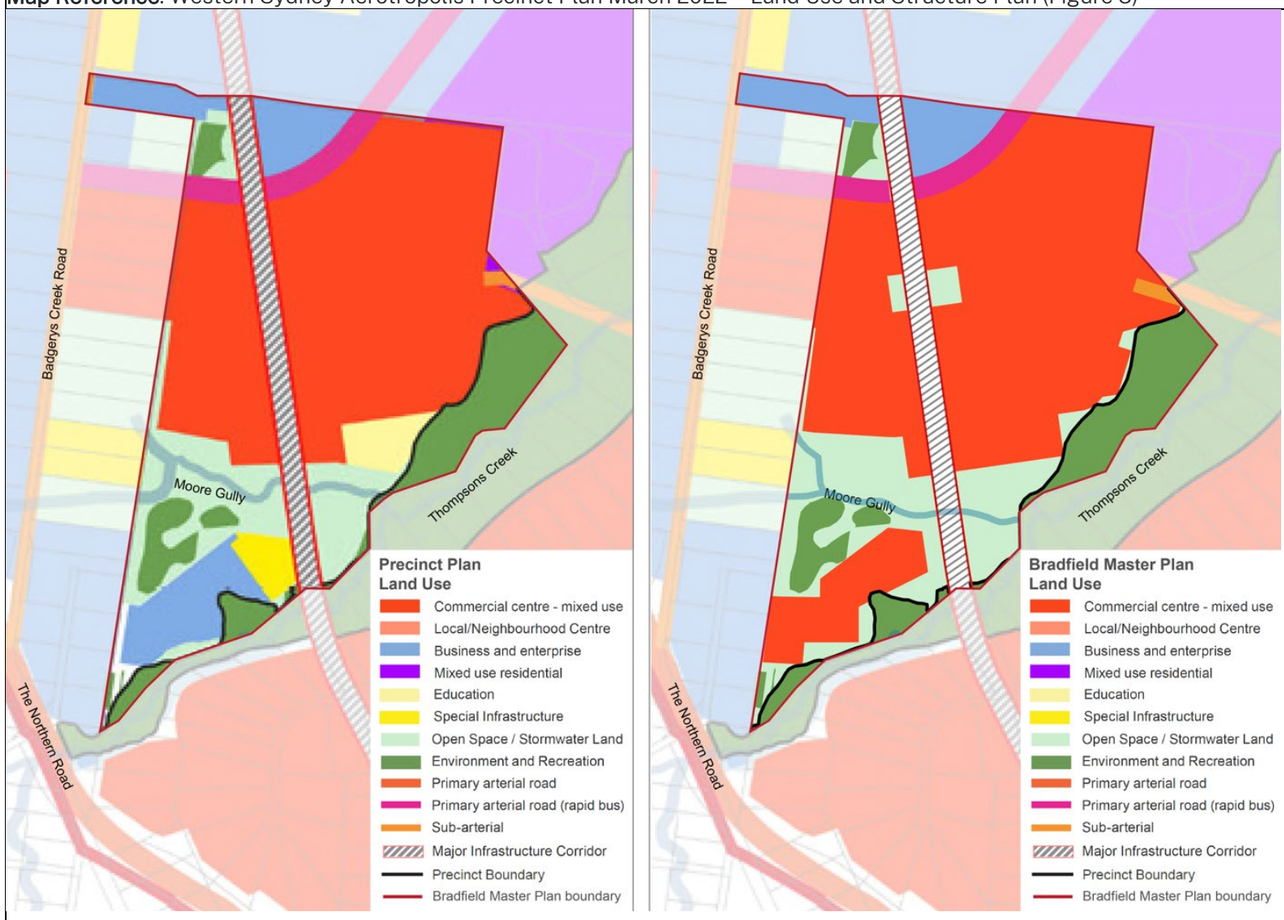
The Master Plan proposes amendments to the Aerotropolis Precinct Plan. The proposed amendments are included within **Table 16**.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

Table 16 - Proposed Western Sydney Aerotropolis Precinct Plan Amendments

Western Sydney Aerotropolis Precinct Plan Amendments

Map Reference: Western Sydney Aerotropolis Precinct Plan March 2022 – Land Use and Structure Plan (Figure 3)



Justification

Map provided:

- Aerotropolis Precinct Plan Land Use comparison with Bradfield Master Plan Land Use Map.

Explanation of change:

- Amendment allows for the identification of a new Central Park in the city centre.
- Amends the land use boundaries at the Thompsons Creek and Moore Gully interface to reflect the Master Plan Design for these areas.
- Amends the land uses in the southern area from 'business and enterprise' to 'Commercial Centre - Mixed use.' This proposed amendment an inconsistency with the Master Plan Sites *Mixed Use (MU)* under the Western Parkland City SEPP.
- Removes the specific location and size for the school within the 'Education' land use area.
- The area that is denoted as 'Special Infrastructure' in the Aerotropolis Precinct Plan has been incorporated within the M*ixed Use (MU)* under the Western Parkland City SEPP and has been amended to reflect the 'Commercial Centre - Mixed use' which is included within the DPE LEP Practice Note.

Justification for change:

- The broader 'Commercial Centre mixed use' category is more appropriate for a city centre than 'business and enterprise,' will support a more active and vibrant city centre and is consistent with the existing Mixed-Use zoning.
- More active retail, commercial, entertainment and residential uses fronting the regional parklands will support greater activation of one of the city's major amenities.
- The *Mixed Use (MU)* zone under the Western Parkland City SEPP allows for the promotion of business, office, retail, entertainment, and tourist uses to occur and to promote a high standard of public amenity and convenient urban living with residential uses to complement this mix and to provide an appropriate transition to the environmental protection areas.
- It is considered that the proposed mixed-use zone will allow for a greater flexibility of land uses such as retail, commercial and residential which will complement the surrounding open space and stormwater land within Moore Gully, allowing for greater use by future residents and workers.

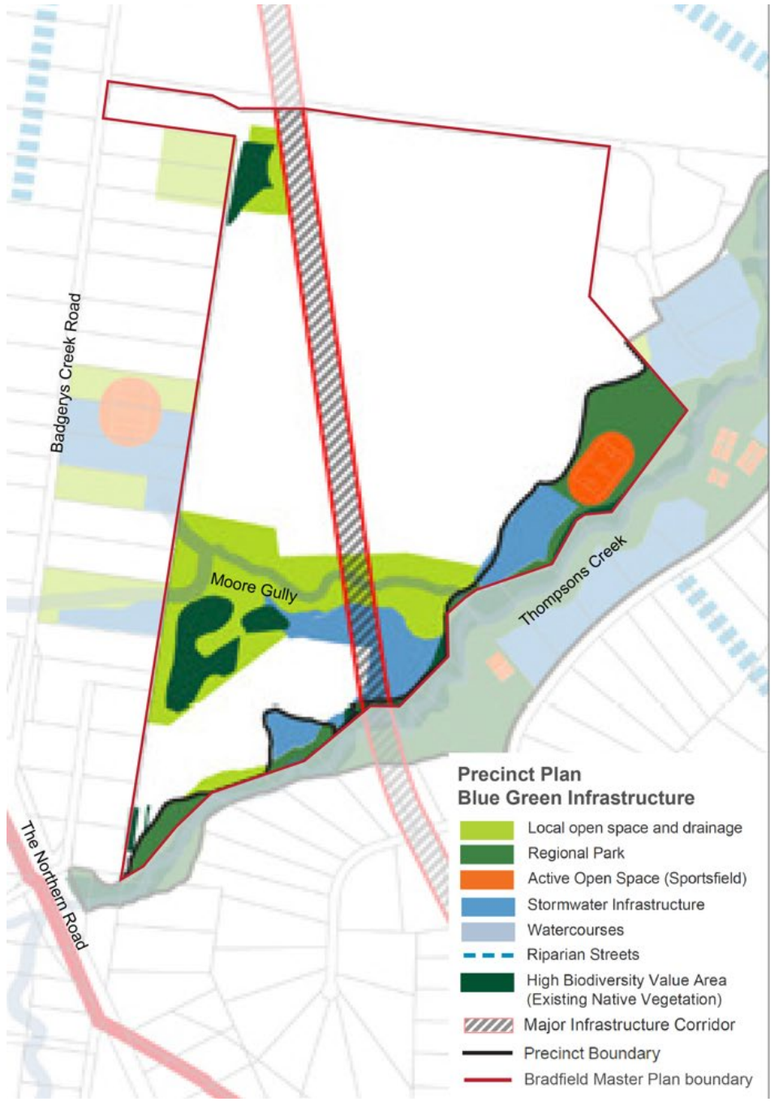
- The Master Plan design for Bradfield City Centre and the regional parklands has refined the Precinct Plan Street layout, block structure and open space configuration having regard to site specific analysis and design considerations.
- It is considered vital for the Parkland City to have a major park in the central heart of the city adjoining the rail and bus interchange.
- Alternative school locations have been identified and requires flexibility for the exact location and design to be finalised.
- The land use map in the Aerotropolis Precinct Plan is indicative. While the Master Plan must comply with the statutory land use requirements of the Western Parkland City SEPP, that it does to full extent.
- The proposed amendment is consistent with the Western Parkland City SEPP *Mixed Use (MU)* zoning for the Master Plan Site.
- The proposed amendment is consistent with the Aerotropolis Precinct Plan, Section 4.1 Land Use and Structure Plan objectives as it will allow a mix of land uses that will deliver employment density, provide housing, community, social and recreation uses.
- The proposed amendment is consistent with the Master Plan Guidelines in that it proposes an amendment to the Aerotropolis Precinct Plan to achieve a superior planning outcome but is consistent with the Aerotropolis Planning Framework.
- The Master Plan delivers a superior planning outcome than the Land Use and Structure Plan under the Aerotropolis Precinct Plan.

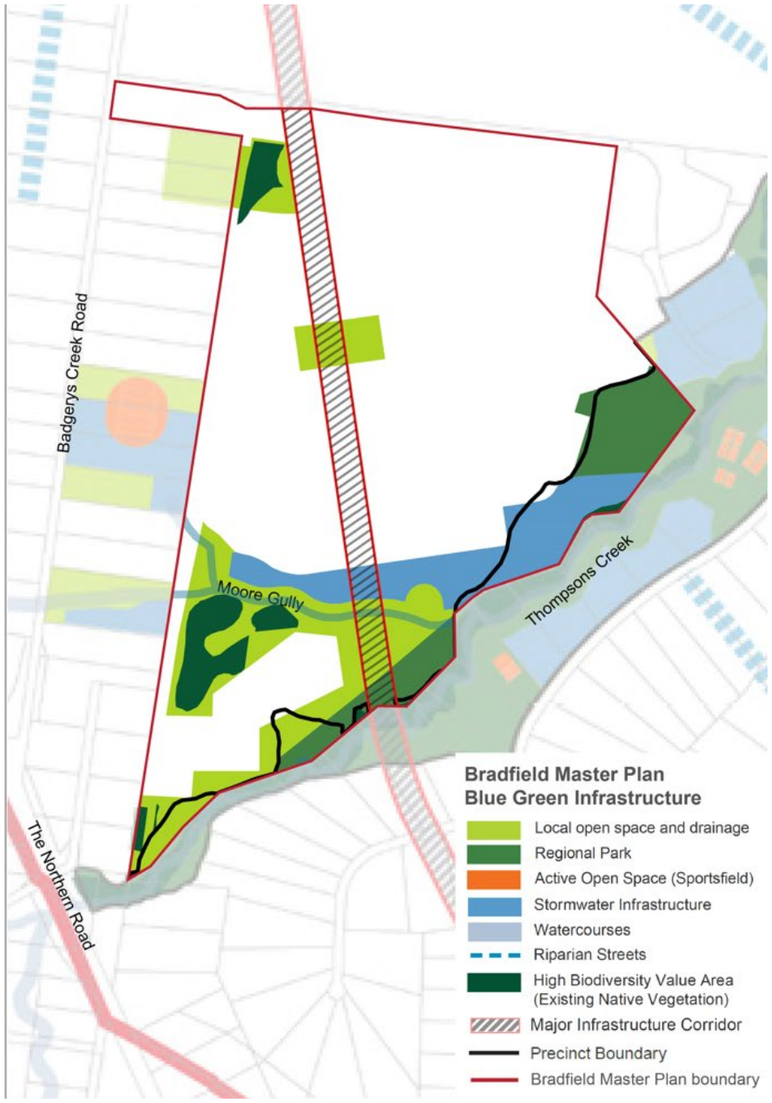
Outcome from proposed amendment:

- The proposed amendment will allow for an enhanced Parkland City identity to be provided.
- The proposed amendment will allow for increased diversity of land uses including residential will create a more vibrant city centre that provides both housing and employment opportunities.
- The proposed amendment is a more flexible land use plan will support future detailed design decisions given the long timeframe for the project to be delivered.

Western Sydney Aerotropolis Precinct Plan Amendments

Map Reference: Western Sydney Aerotropolis Precinct Plan March 2022 – Blue – Green Infrastructure Framework (Figure 5)





Justification

Map provided:

- Aerotropolis Precinct Plan Blue Green Infrastructure and Bradfield Master Plan Blue Green Infrastructure Comparison Map.

Explanation of change:

- To amend the open space boundaries to reflect the master plan design for Ridge Park, Central Park, and Moore Gully/ Thompsons Creek.
- To reflect the Moore Gully realignment proposed in the master plan.
- To amend the stormwater areas to reflect the master plan design.

Justification for change:

- Ridge Park is proposed to be connected to the open space identified adjoining the western boundary to create a larger contiguous park.
- It is considered vital for the Parkland City to have a major park in the central heart of the city adjoining the rail and bus interchange.
- Moore Gully is an ephemeral waterway, has a variable path each year and has no defined channel or riparian corridor. The proposed realignment is within the area that it occasionally flows over and would enable a more defined channel, revegetate riparian corridor, and enable improved management of the waterway and surrounding area for flooding.
- Stormwater basins are required on the northern side of Moore Gully to capture, treat, and manage stormwater from the catchment prior to entering Moore Gully and Thompsons Creek.

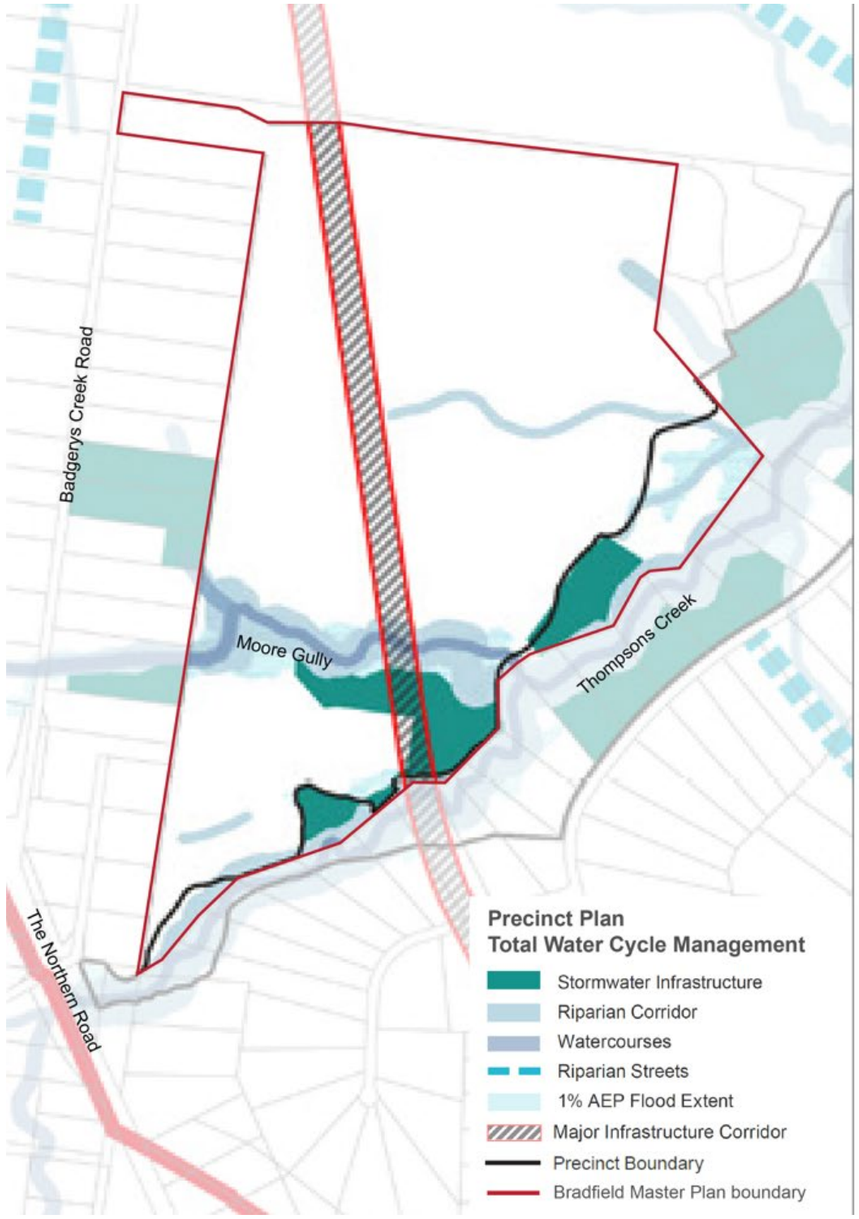
- The proposed stormwater area is the same size as shown in the Aerotropolis Precinct Plan and has been designed and tested to meet technical requirements.
- The proposed stormwater management system integrates considerations for recreation, ecology, waterway health and flooding in line with the Parkland City vision set out in the Aerotropolis Precinct Plan.
- This amendment is justifiable as they are based on the ground truthing and more detailed technical analysis of this areas which has been undertaken during the preparation of the Master Plan Application.
- The proposed amendment is consistent with the Western Parkland City SEPP, Chapter 4, Part 4.1, Section 4.1 in that it will allow for contribute to the conservation of biodiversity and will help enhance trees and vegetation across the Master Plan Site.
- The proposed amendment is consistent with the Aerotropolis Precinct Plan, Section 4.5 Blue – Green Infrastructure objectives as it allows for the blue and green systems across the Aerotropolis for water quality management and biodiversity to be provided,
- The proposed amendment is consistent with the Master Plan Guidelines in that it proposes an amendment to the Aerotropolis Precinct Plan to achieve a superior planning outcome but is consistent with the Aerotropolis Planning Framework.

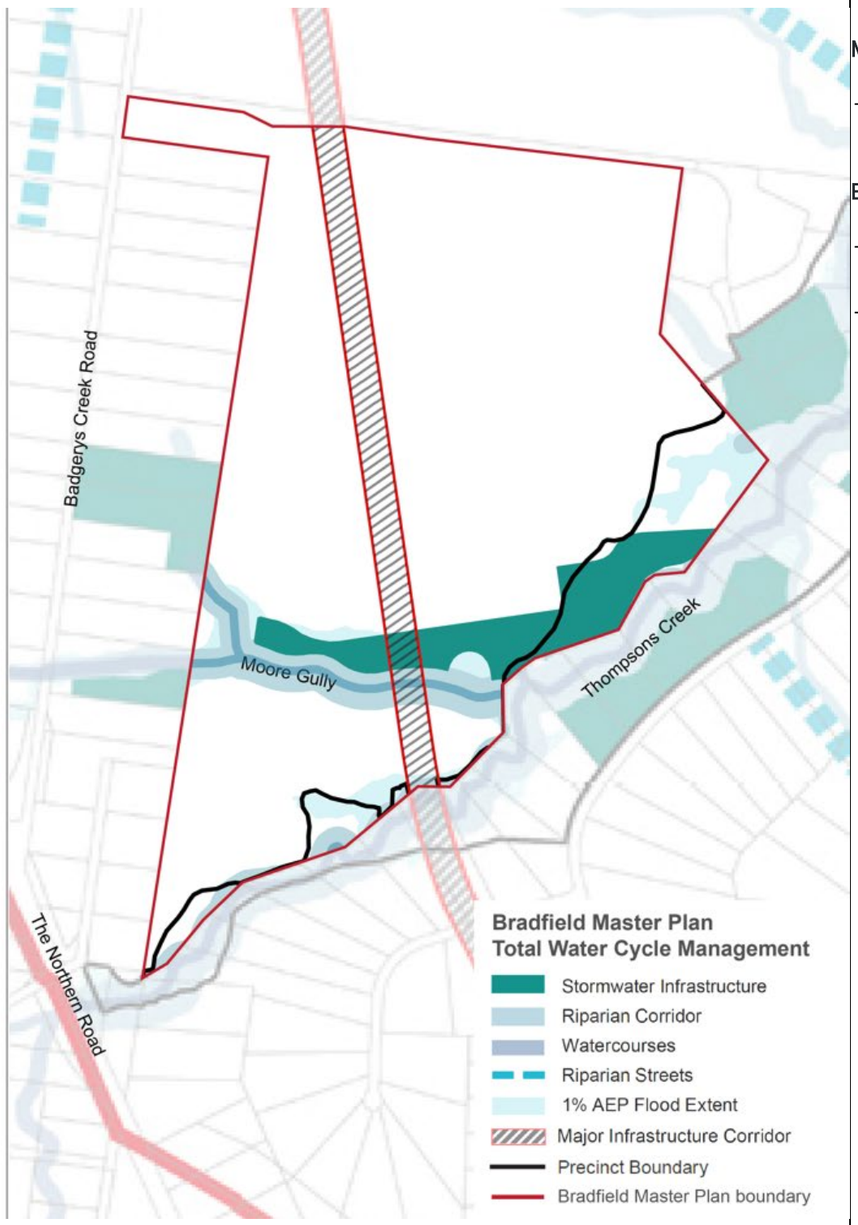
Outcome from proposed amendment:

- Larger Ridge Park and creation of a new Central Park not identified in the Precinct Plan.
- Improved vegetation, ecology, and water management of Moore Gully.
- Superior stormwater management that integrates recreation, ecology and water management and achieves technical requirements in line with the Precinct Plan.

Western Sydney Aerotropolis Precinct Plan Amendments

Map Reference: Western Sydney Aerotropolis Precinct Plan March 2022 – Total Water Cycle Management (Figure 6)





Justification

Map provided:

- Aerotropolis Precinct Plan Total Water Cycle Management comparison with Bradfield Master Plan B Total Water Cycle Management comparison Map.

Explanation of change:

- The amendment reflects the Moore Gully realignment proposed in the Master plan.
- To amend the stormwater areas to reflect the master plan design.

Justification for change:

- The proposed amendments represent the actual ground conditions and will deliver a more sustainable design outcome for the Master Plan Site.
- Moore Gully is an ephemeral waterway which has a variable path each year and has no defined channel or riparian corridor. The proposed realignment is within the area that it occasionally flows over and would enable a more defined channel, revegetate riparian corridor, and enable improved management of the waterway and surrounding area for flooding.
- Stormwater basins are required on the northern side of Moore Gully to capture, treat, and manage stormwater from the catchment prior to entering Moore Gully and Thompsons Creek.

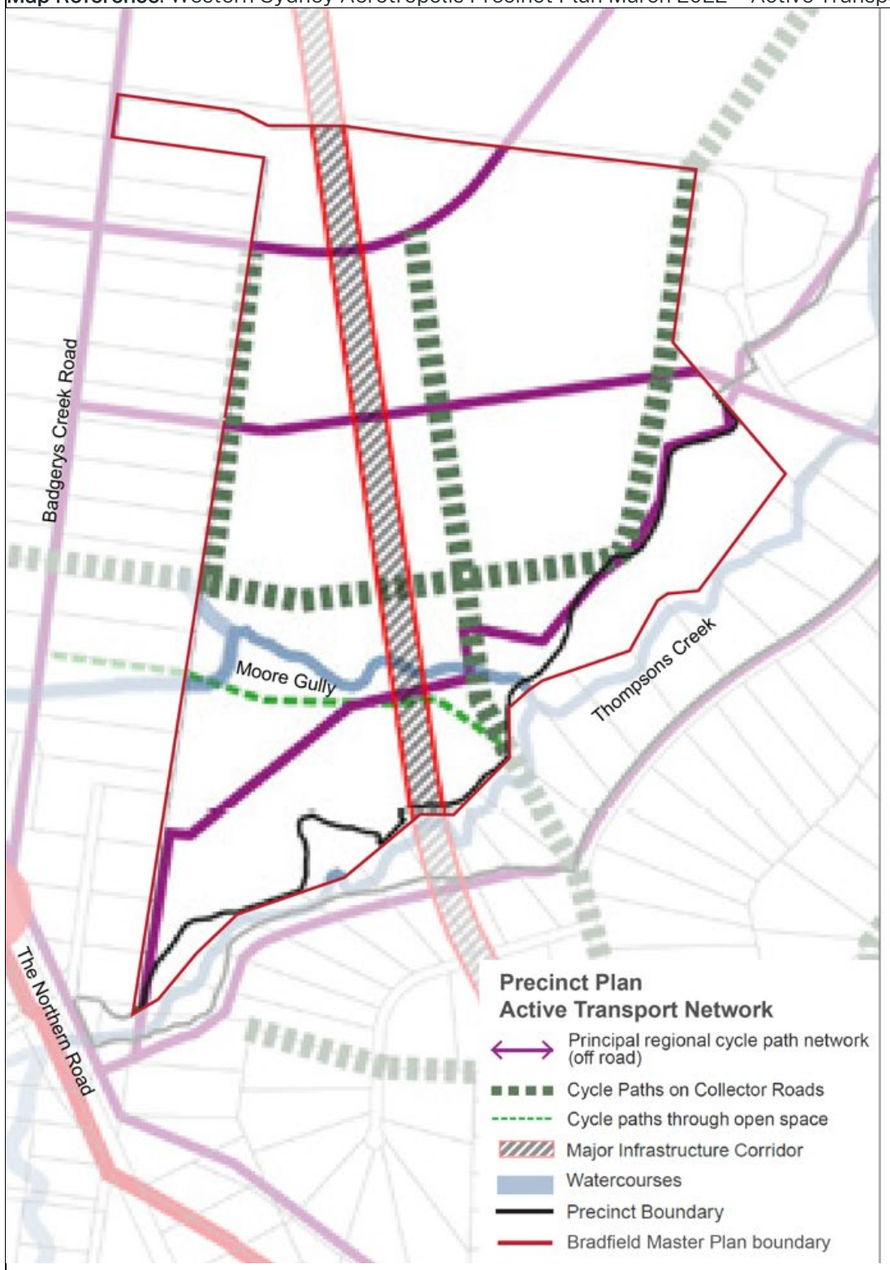
- The proposed stormwater area is the same size as shown in the Aerotropolis Precinct Plan and has been designed and tested to meet technical requirements.
- The proposed stormwater management system integrates considerations for recreation, ecology, waterway health and flooding in line with the Parkland City vision set out in the Aerotropolis Precinct Plan.
- The proposed amendment is consistent with the Western Parkland City SEPP, Chapter 4, Part 4.1, Section 4.1 as the proposed amendment will still allow for the protection, maintaining, enhancing, and minimising impacts on the health of waterways across the Master Plan Site.
- The proposed amendments are consistent with the Aerotropolis Precinct Plan in that it will continue to allow for the integration of blue water systems across the Aerotropolis for water quality management. The proposed amendment will still protect and maintain water bodies, allows for stormwater management and water sensitive urban design, and contributes to broader objectives of waterway health.
- The proposed amendment is consistent with the Master Plan Guidelines in that it proposes an amendment to the Aerotropolis Precinct Plan to achieve a superior planning outcome but is consistent with the Aerotropolis Planning Framework.
- The Master Plan delivers a superior planning outcome than the Aerotropolis Precinct Plan Total Water Cycle Management map.

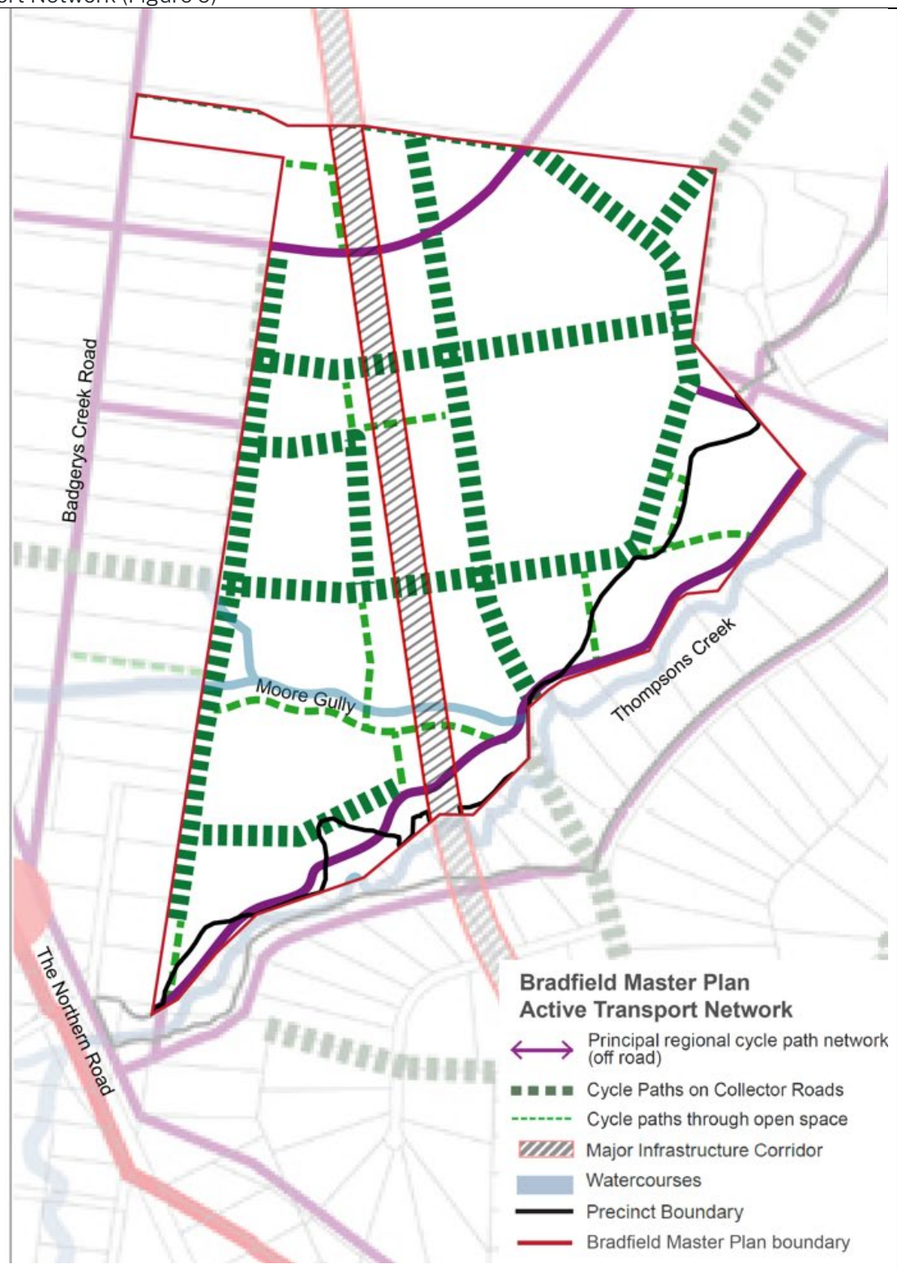
Outcome from proposed amendment:

- The proposed amendment will lead to improved vegetation, ecology, and water management of Moore Gully.
- The proposed amendment will lead to superior stormwater management that integrates recreation, ecology and water management and achieves technical requirements in line with the Precinct Plan.

Western Sydney Aerotropolis Precinct Plan Amendments

Map Reference: Western Sydney Aerotropolis Precinct Plan March 2022 – Active Transport Network (Figure 9)





Justification

Map provided:

— Aerotropolis Precinct Plan Active Transport Network comparison with Bradfield Master Plan Active Transport Network comparison Map.

Explanation of change:

The Master Plan seeks adjustments to the Active Transport Network map to ensure its consistency with the proposed street and block network for the Master Plan Site.

These amendments will:

— Align cycle paths with the proposed master plan street layout and open space configuration.

— Identify additional cycle path connections through the Master Plan Site.

— Realign the principal cycle path along Thompsons Creek.

Justification for change:

— Provides additional cycle paths to rail and bus interchange and Central Park.

— Provides additional cycle paths through Thompsons Creek regional park.

— Provides more direct connection between Whitaker Road and Metro Link Boulevard.

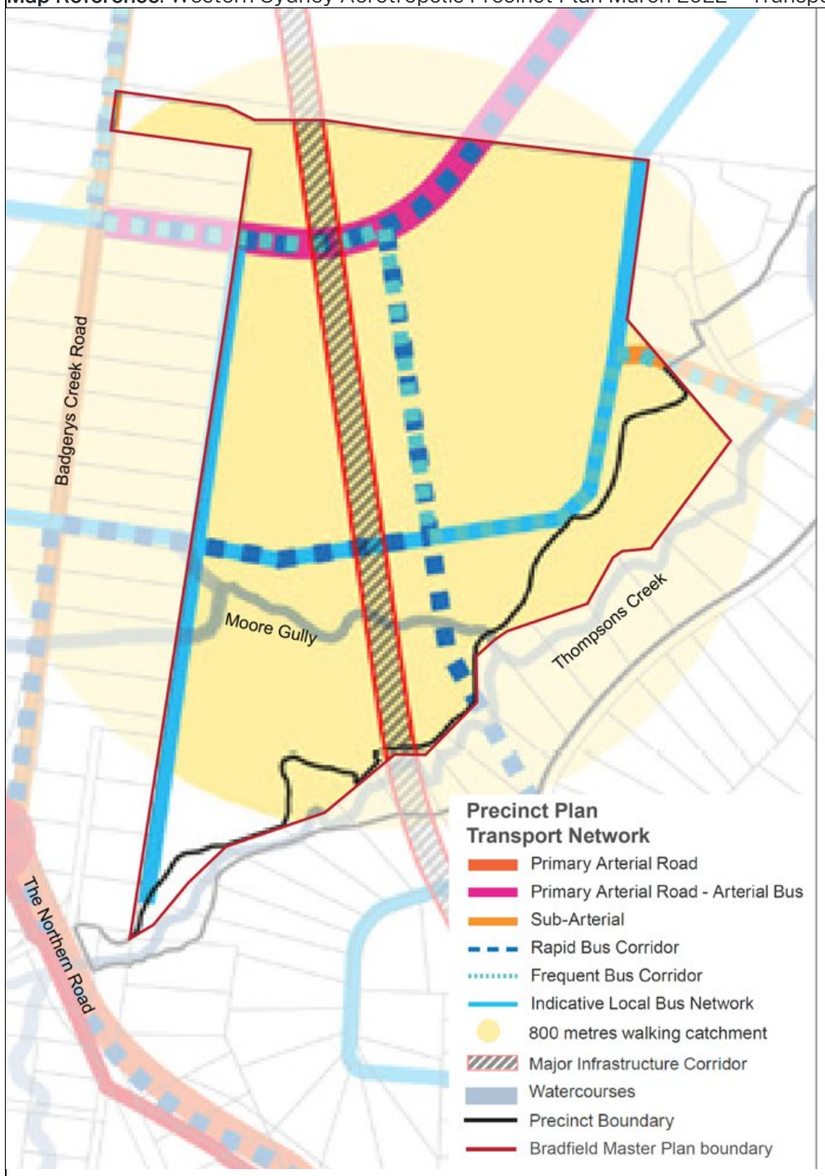
- Realigned bridge over Thompsons Creek to the east slightly will reduce the span required, reduce impact to parklands and reduce cost.
- Realigned Whitaker Road slightly to avoid the adjoining parcel of private land to facilitate delivery.
- The proposed amendments include the provision of detailed design and enhancements to the network.
- As part of this amendment to the Aerotropolis Precinct Plan map, the key Transport Network elements were maintained within similar locations as currently shown on the Aerotropolis Precinct Plan.
- The proposed amendment is consistent with the Western Parkland City SEPP Chapter 4, Part 4.1, Section 4.1 in that it promotes the sustainable, orderly, and transformational development in the Western Sydney Aerotropolis through providing an Active Transport network which is consistent with the proposed street and block network for the Master Plan Site.
- The proposed amendment is consistent with the Aerotropolis Precinct Plan, Section 4.6 objectives in that it will provide safe, direct, and interconnected pedestrian and cycling links to a variety of destinations and transport nodes across the Master Plan Site and will encourage active transport through a cycle and pedestrian network.
- The proposed amendment is consistent with the Master Plan Guidelines in that it proposes an amendment to the Aerotropolis Precinct Plan to achieve a superior planning outcome but is consistent with the Aerotropolis Planning Framework.
- The revised active transport network map for the Master Plan provides for superior outcomes compared to the Aerotropolis Precinct Plan.

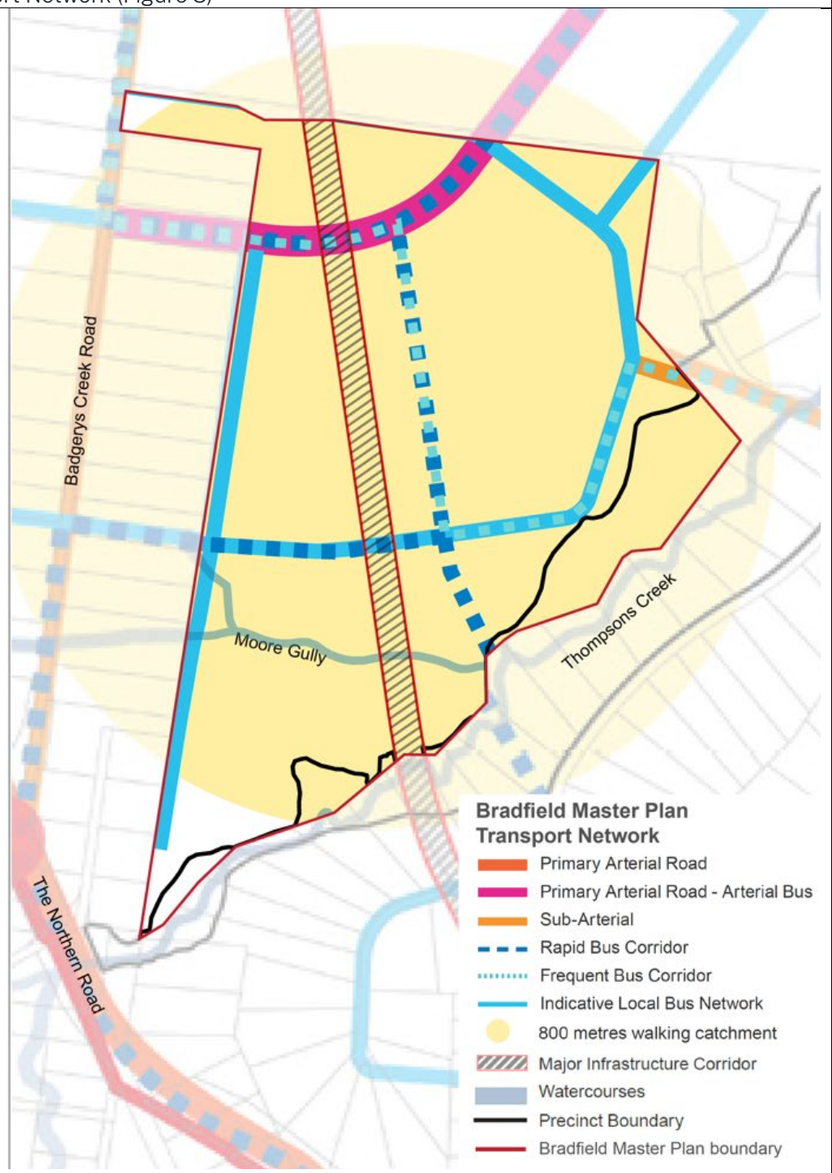
Outcome from proposed amendment:

- This amendment will allow for a more comprehensive cycle path network than the Aerotropolis Precinct Plan to help achieve the modal split targets and promote more sustainable and healthy transport choices.

Western Sydney Aerotropolis Precinct Plan Amendments

Map Reference: Western Sydney Aerotropolis Precinct Plan March 2022 – Transport Network (Figure 8)





Justification

Map provided:

- Aerotropolis Precinct Plan Transport Network comparison with Bradfield Master Plan Transport Network comparison Map.

Explanation of change:

The Master Plan seeks some adjustments to the Transport Network alignments including:

- Amend the collector road and local bus network for more direct connection between Whitaker Road and Metro Link Boulevard.
- Realigned the bridge over Thompsons Creek to the east slightly.
- Realigned Whitaker Road slightly.

Justification for change:

- The Master Plan design proposes more direct connection from Whitaker Road to Metro Link Boulevard than the Precinct Plan to enable traffic to move around the city centre rather than through it.
- Realigned bridge over Thompsons Creek to the east slightly will reduce the span required, reduce impact to parklands and reduce cost.
- Realigned Whitaker Road slightly to avoid the adjoining parcel of private land to facilitate delivery.
- These amendments are justifiable as the Master Plan will still allow for the provision of the following:
    - 800m walking catchment area.
    - Primary Arterial Road – Arterial Bus.

- Rapid Bus Corridor.
- Frequent bus corridor.
- Local Bus Network.
- Sub-Arterial Roads.

— The proposed adjustments/realignments are justifiable as the Master Plan application will deliver on the key Transport Network elements contained within the Aerotropolis Precinct Plan and will allow for key public transport connections through and to the Master Plan Site to be delivered.

— This proposed amendment provides for a better planning outcome as it delivers a transport network that aligns with the proposed changes to the block structure within the Master Plan Site without jeopardising the connections to the Master Plan Site from the neighbouring areas.

— The proposed amendment is consistent with the Western Parkland City SEPP Chapter 4, Part 4.1, Section 4.1 in that it promotes the sustainable, orderly, and transformational development in the Western Sydney Aerotropolis through providing a refined Transport network and allows areas to be nominated for future infrastructure development to allow for connections to the Western Sydney Airport and surrounding precincts.

— The proposed amendment is consistent with the Aerotropolis Precinct Plan, Section 4,6 in that it still allows for the movement of people through walking catchments to public transport connections to support a 30-minute city. It also allows for the provision of direct connections across the Master Plan Site to the key areas and transport notes including the Western Sydney Airport utilising public transport options.

— The proposed amendment is consistent with the Master Plan Guidelines in that it proposes an amendment to the Aerotropolis Precinct Plan to achieve a superior planning outcome but is consistent with the Aerotropolis Planning Framework.

The Master Plan delivers a superior planning outcome than the nominated Transport Network under the Aerotropolis Precinct Plan.

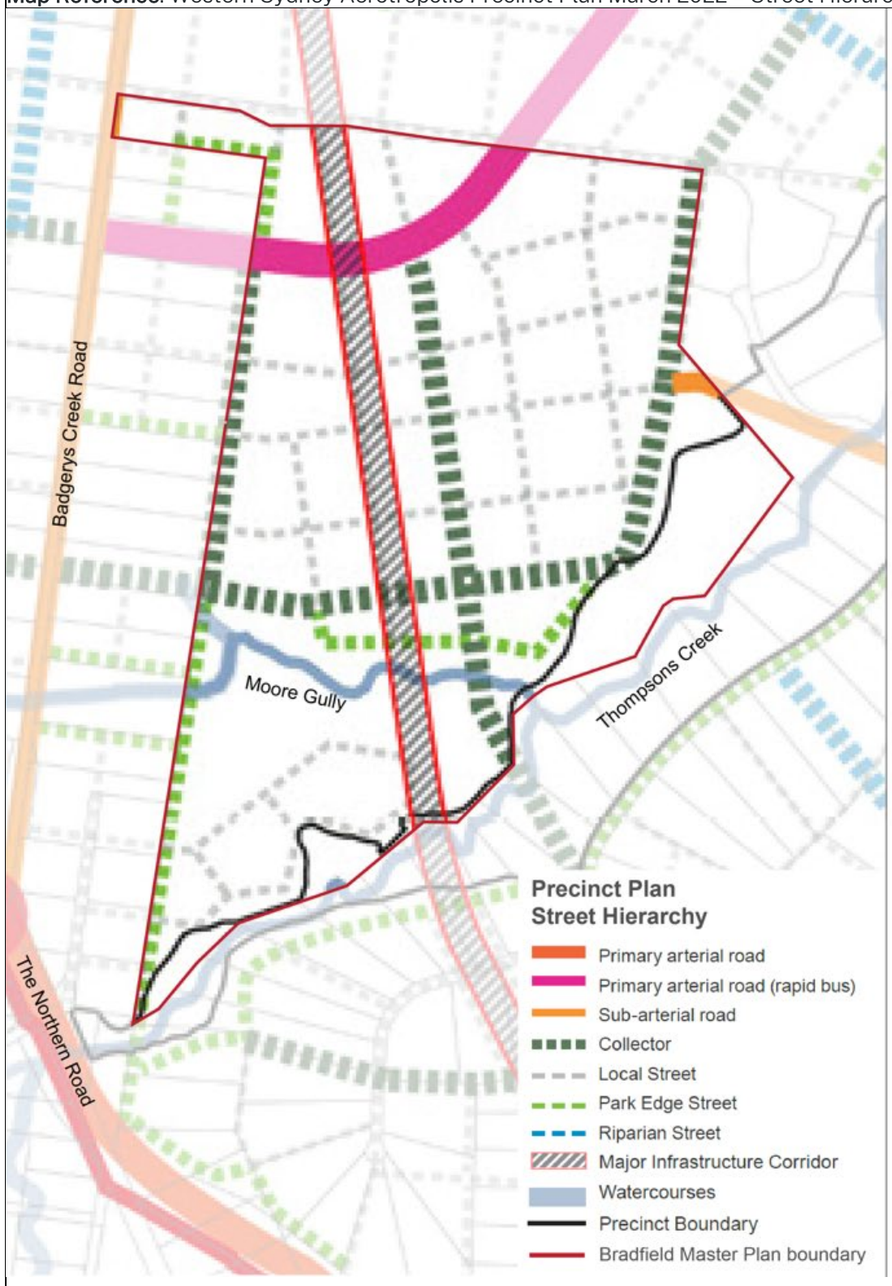
Outcome from proposed amendment:

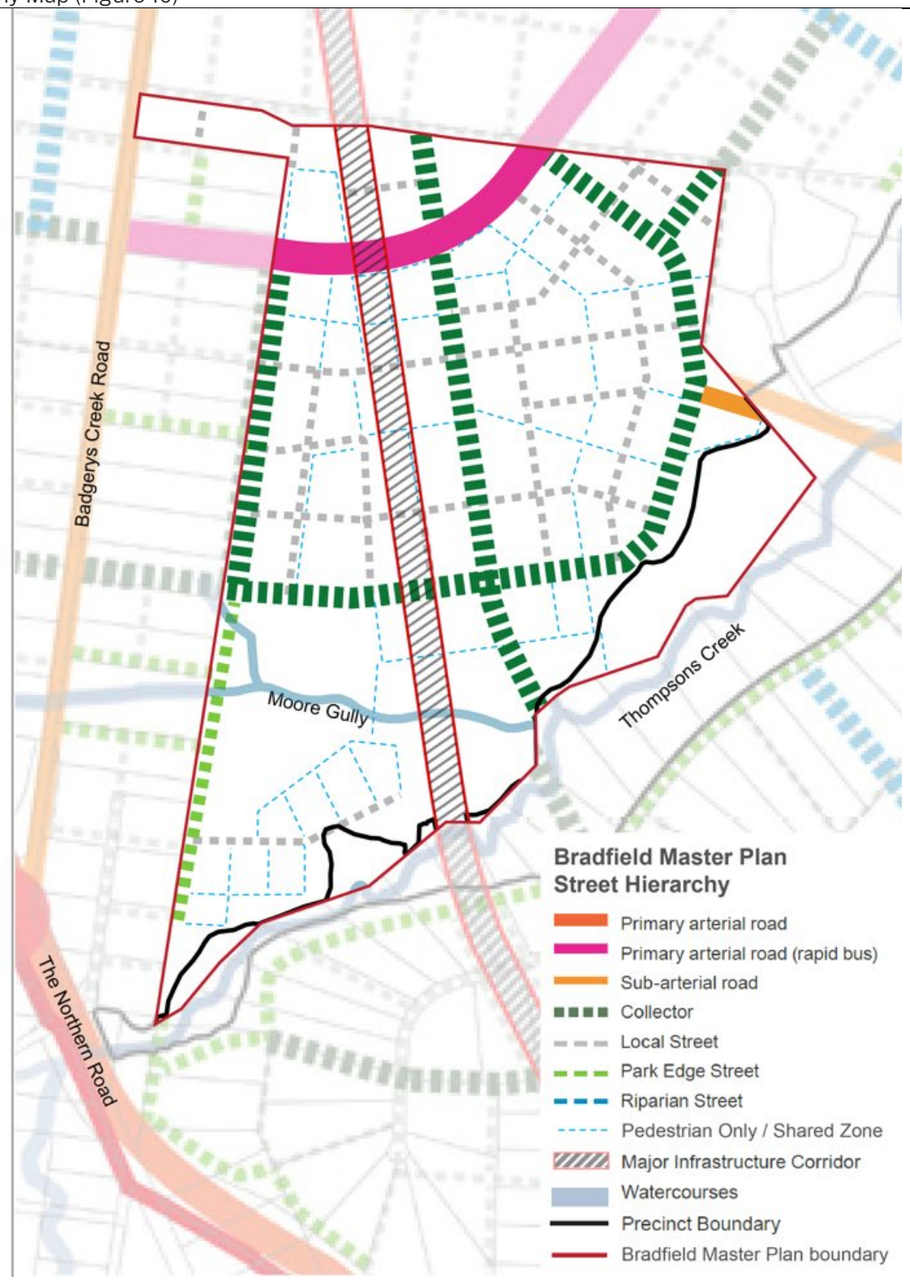
— The proposed amendment allows for a more connected transport network than the Precinct Plan.

— The proposed amendment facilitates improved delivery of transport infrastructure.

Western Sydney Aerotropolis Precinct Plan Amendments

Map Reference: Western Sydney Aerotropolis Precinct Plan March 2022 – Street Hierarchy Map (Figure 10)





Justification

Map provided:

— Aerotropolis Precinct Plan Street Hierarchy Map comparison with Bradfield Master Plan Street Hierarchy comparison Map.

Explanation of change:

The following amendments are proposed:

— Amend the street network in line with the Master Plan design.

— Identify pedestrian-only and shared zone street types (City Lanes and Parklands Promenade).

— Provide direct connections from Central Park to Moore Gully and Thompsons Creek activity nodes.

— Amend the collector roads more direct connection between Whitaker Road and Metro Link Boulevard.

— Identify pedestrian connections across Moore Gully and Thompsons Creek regional park.

— Realigned the bridge over Thompsons Creek to the east slightly.

— Realigned Whitaker Road slightly.

Justification for change:

— The proposed amendments will allow for a finer grain street network than the Aerotropolis Precinct Plan.

— Maintains the general grid structure of the Aerotropolis Precinct Plan.

- More direct connections between key activity nodes and destinations than the Aerotropolis Precinct Plan.
- Provides for a more diverse street types than the Aerotropolis Precinct Plan for more urban context.
- Provides additional pedestrian connections across Moore Gully and Thompsons Creek regional park than the Aerotropolis Precinct Plan.
- The Master Plan design proposes more direct connection from Whitaker Road to Metro Link Boulevard than the Precinct Plan to enable traffic to move around the city centre rather than through it.
- Realigned bridge over Thompsons Creek to the east slightly will reduce the span required, reduce impact to parklands and reduce cost.
- Realigned Whitaker Road slightly to avoid the adjoining parcel of private land to facilitate delivery.
- No amendments have been proposed to state roads within the Master Plan Site.
- The proposed changes to the Aerotropolis Precinct Plan Street network will prioritise pedestrian movement over vehicular access, encourage more active transport usage within the Master Plan Site due to a better alignment of streets with the climatic conditions on Master Plan Site such as maximising solar access and minimising the exposure to dominant winds.
- By directing vehicular movement to the peripheries of the city centre, the proposal will deliver a superior planning outcome through increasing the safety and amenity for pedestrians and cyclists within the Master Plan Site.
- The proposed amendments are consistent with the intention of the Aerotropolis Precinct Plan that aims to facilitate accessibility through the Aerotropolis without encouraging private vehicle usage.
- The proposed amendment is consistent with the Western Parkland City SEPP Chapter 4, Part 4.1, Section 4.1, in that it will ensure that future development is compatible with the long-term growth of critical transport infrastructure.
- The proposed amendment is consistent with the Aerotropolis Precinct Plan, Section 4,6.2 in that it will still establish a hierarchy of streets that overall supports the development of the aerotropolis and will provide streets which are safe and efficient for the movement of people and freight.
- The proposed amendment is consistent with the Master Plan Guidelines in that it proposes an amendment to the Aerotropolis Precinct Plan to achieve a superior planning outcome but is consistent with the Aerotropolis Planning Framework.
- The Master Plan delivers a superior planning outcome than the Street Hierarchy Map under the Aerotropolis Precinct Plan.

Outcome from proposed amendment:

- The proposed amendment will allow a finer grain structure than the Aerotropolis Precinct Plan that prioritises pedestrian movement to create a more walkable city to help achieve the modal split targets and promote more sustainable and healthy transport choices.
- The proposed amendment will allow a more direct convenient access between key destinations and activity nodes than the Aerotropolis Precinct Plan.
- The proposed amendment will allow for a more connected transport network than the Aerotropolis Precinct Plan.
- The proposed amendment will facilitate the improved delivery of transport infrastructure.

11.2 Proposed changes to the Western Sydney Aerotropolis Development Control Plan Phase 2

The Bradfield City Centre Master Plan Site-Specific Development Controls document (referred to as the Bradfield Master Plan) has been prepared as part of the master planning application.

It is envisaged that the Site-Specific Development Controls will form part of the Western Sydney Aerotropolis Development Control Plan Phase 2 (Aerotropolis DCP).

11.2.1 Bradfield Master Plan

The Bradfield Master Plan provides a place-based vision, objectives, and development controls to guide future development in Bradfield City Centre. This includes alternative benchmark solutions and additional controls to those in the wider Aerotropolis DCP.

Table 17 below provides justification for the alternative benchmark solutions and additional controls in relation to each section of the Aerotropolis DCP.

Table 17 – Schedule and Justification for Aerotropolis DCP Variations

Aerotropolis DCP	Master Plan Variations	Justification for proposed amendment
2.1 Recognise Country	The Master Plan includes additional provisions relating to Recognise Country at Section 4 of the Master Plan.	The Master Plan proposes additional controls to supplement Section 2.1 of the Aerotropolis DCP relating to Recognise Country. The four key values provide the foundation for the Master Plan and collectively form the Connecting with Country framework to ensure country underpins all aspects of city making. These values have been developed in collaboration with the Aboriginal community.
2.3 Stormwater, Water Sensitive Urban Design, and Integrated Water Management		
2.3.1 Waterway Health and Riparian Corridors	Benchmark solutions relating to Strahler Order 1 watercourses at Section 2.3.1(PO1)(b) and 2.3.2(PO1)(2),(3) (4) and (7) are replaced by Section 8.2 of the Master Plan.	Bradfield City Centre has been designed as a parkland city incorporating a landscaped Green Loop around the City Centre, provision of parks and extensive landscaping along the streetscape, in addition to extensive stormwater wetlands and basins along Moore Gully and Thompsons Creek to achieve the blue-green loop vision set out in the Western Sydney Aerotropolis Precinct Plan. The Master Plan proposes to replace the controls referenced in Clause 2.3.1 (PO1, b) and Clause 2.3.2 (PO1)(2),(3) (4) and (7) with Section 8.2 of the Master Plan. Riparian streets and drainage channels are not an appropriate solution to managing stormwater in high density urban areas, therefore stormwater can be managed using a piped system which is integrated within the street network. Justification for the proposed new clause is provided below: • The proposed alternative solution will not set a precedent in the Aerotropolis as the outcome is restricted to the Bradfield City Centre - Master Plan site which is zoned mixed use and identified within the Precinct Plan as the primary centre of the Aerotropolis and a core metropolitan centre. • The site is the core of all Aerotropolis activities, the proposed pipe and street network is a more suitable response for the site, as it can adequately service the future city centre and encourage the delivery of

		high-density urban forms and land uses envisioned under the Precinct Plan. • While the preliminary stormwater catchment strategy currently indicates that there are no catchments >15ha, there is potential that some catchments may slightly exceed the 15ha threshold before the need for naturalised drainage channels. • All catchments within the Bradfield City Centre will be draining into the Regional Stormwater Basins (managed by Sydney Water) for treatment and detention prior to discharging into Moore Gully and Thompsons Creek. As a result, the quantity and quality of the stormwater discharging into the waterways will be managed to meet the relevant DCP requirements for waterway health. • The runoff up to the 1% AEP can be conveyed between the kerbs along streets in accordance with the standard requirements of the Australian Rainfall and Runoff Guidelines. • The use of naturalised drainage channels in a high density, urban area such as the Bradfield City Centre is not appropriate due to the volume of pedestrian and active transport movements across the City Centre and the likely number of access/egress points from buildings. The proposed new controls are appropriate given the nature of the site and still achieve the objectives of Clause 2.3.1 and Clause 2.3.2. Overall, the new controls proposed align with the strategic intent of the Aerotropolis Precinct and are compatible with the context and future character of the site.
2.3.2 Stormwater Management and Water Sensitive Urban Design	Benchmark solutions for perviousness in Section 2.3.2(PO8) are replaced by Section 8.2 of the Master Plan	Under the current DCP controls, development in a mixed-use centre with an FSR over 2:1 is required to achieve 30% perviousness. This control applies to the broader Aerotropolis precinct. The Master Plan site will facilitate a new city centre comprising of a variety of mixed use-built forms. Whilst the entirety of the site can achieve 30% perviousness, feedback is that 30% perviousness on each individual development lot is unachievable.

		The Master Plan sets out alternative benchmark solutions to the lot perviousness control referenced in Clause 2.3.2 (PO8) of the DCP with a new control that applies to individual development lots. The new control requires that each individual development lot achieve at least 16% perviousness. The proposed new control is appropriate given the nature of the site and still achieves the objectives of the Clause 2.3.2 of the DCP which are to manage indirect and ongoing impacts of development on waterways, utilise stormwater for passive irrigation and to protect, maintain and restore the ecological condition, hydrology, and hydrogeology of aquatic ecosystems. Overall, the alternative controls proposed align with the strategic intent of the Aerotropolis Precinct and are compatible with the context and future character of the site.
2.4 Vegetation and Biodiversity **2.4.1 Deep Soil and Tree Canopy**	Benchmark solutions for canopy cover and deep soil targets at Section 2.4.1(PO1) are replaced with Section 8.1 of the Master Plan.	The Master Plan for Bradfield City Centre provides a different composition of lots, streets, and open space to the urban typologies outlined within the Aerotropolis DCP. The master plan proposes to amend the current deep soil and tree canopy controls that apply to the site and establishes alternative controls for individual lots, street types and open space areas. The Master Plan proposes that all individual development sites are to achieve canopy cover of at least 15% of the site area and deep soil of at least 10% of the site area. The proposed control is more appropriate for an urban city centre and is consistent with City of Sydney DCP control. The alternative controls proposed can achieve an average canopy cover of 42% across the entirety of the site which exceeds the 40% target under the Aerotropolis Precinct Plan, additionally, each open space is able to achieve a canopy cover of at least 45%, consistent with the Aerotropolis DCP. The proposed controls are appropriate given the nature of the site and still achieve the objectives of the Clause 2.4.1 which is to provide sufficient space for sustainable tree growth to increase the canopy cover across the Aerotropolis.

2.5 Flooding and Environmental Resilience Management	The Master Plan includes additional controls relating to Mitigating Urban Heat Island Effect at Section 8.6 of the Master Plan.	The Master Plan proposes additional controls relating to green cover on buildings. The additional controls seek to improve the mitigation of Urban Heat Island within the Bradfield City Centre.
2.6 Road design for Arterial and Sub-Arterial Roads	The arterial and sub-arterial road cross sections referenced in 2.6(PO1) are replaced by the cross sections at Section 10 in the Master Plan	The Master Plan proposes amendments to the Street Hierarchy Map in the Aerotropolis Precinct Plan. Several street sections have been further refined and additional street types have been provided to offer greater diversity and achieve the vision of a pedestrian - focussed, safe and sustainable movement network within the Bradfield City Centre. The revised cross sections reflect the changes to the Precinct Plan and ensure consistency across the Planning Framework. In summary the proposed amendments to the Street Hierarchy Map include: • Amendments to the street network in line with the Master Plan design. • Identify pedestrian-only and shared zone street types (City Lanes and Parklands Promenade). • Provide direct connections from Central Park to Moore Gully and Thompsons Creek activity nodes. • Amend the collector roads more direct connection between Whitaker Road and Metro Link Boulevard. • Identify pedestrian connections across Moore Gully and Thompsons Creek regional park. • Realigned the bridge over Thompsons Creek to the east slightly. • Realigned Whitaker Road slightly. Overall, the amendments allow for a finer grain structure that prioritises pedestrian movement and promotes more sustainable and healthy transport choices. In addition, the amendments enable more direct convenient access between key destinations and activity nodes and facilitate the improved delivery of transport infrastructure by providing a more connected transport network.
2.12 Sustainability	The Master Plan includes additional controls relating to	The Master Plan proposes additional controls to improve sustainability outcomes for the site.

	Sustainability at Section 8.5 of the Master Plan.	
2.19 Public Art	The Master Plan includes additional provisions relating to Public Art at Section 8.3.	The Master Plan proposes an additional control that will provide a coordinated approach to Public Art within the Bradfield City Centre.
3.1 Local Road Network and Design	The local road cross sections referenced in 3.1.1(PO1) are replaced by the cross sections in Section 10 of the Master Plan.	The Master Plan proposes amendments to the Street Hierarchy Map in the Aerotropolis Precinct Plan. Several street sections have been further refined and additional street types have been provided to offer greater diversity and achieve the vision of a pedestrian - focussed, safe and sustainable movement network within the Bradfield City Centre. As a result of these amendments, the cross sections referenced in Clause 3.1.1 (PO1) will not apply to the Bradfield City Centre site and are replaced by the cross sections at Section 10 in the Master Plan.
3.3 Built form		
3.3.2 Building Setbacks **3.3.3 Landscape Setbacks**	The street setbacks referenced in **3.3.2 and 3.3.3 (PO1)** are replaced by the street setbacks at Section 7.3 of the Master Plan.	The Master Plan sets out alternative benchmark solutions to setbacks with more detailed site-specific setbacks for the Bradfield City Centre site. The building and ground level street setbacks proposed under Section 7.3 of the Masterplan respond to the street hierarchy and urban context of the site and make allowances for the provision of tree canopy, deep soil, and landscape zones. Complementary to this, building envelopes have been established and provide appropriate building separation that responds to the site context, building use, orientation, and street network. It is considered that the alternative site-specific setback control provides the necessary setbacks to maximise efficient use of land where amenity in the public domain is not reduced.
4.1 Road Network and Design	The local road cross sections referenced in 4.1.1 (PO1) are replaced by the cross sections at Section 10 in the Master Plan.	The master plan proposes amendments to the Street Hierarchy Map in the Aerotropolis Precinct Plan. Several street sections have been further refined and additional street types have been provided to offer greater diversity and achieve the vision of a pedestrian - focussed, safe and sustainable movement network within the Bradfield City Centre. The revised cross sections reflect the changes to the Precinct Plan and ensure consistency across the Planning Framework.
4.2 Built Form	See subsections below.	

4.2.2 Amenity and Sustainability	The benchmark solution for gross building footprint at Section 4.2.2 (PO2) (5) is replaced with Section 7.6 of the Master Plan.	Under the DCP the maximum gross footprint for a commercial tower is 1,500 sqm. The Master Plan proposes that the maximum gross footprint for a commercial tower above five storeys is 1,500 sqm. The alternative control is generally consistent with Clause 4.2.2 (PO2) (5); however, it applies only to commercial towers above five storeys. The minor variation to the existing building footprints is appropriate given the master plan site will facilitate a new city centre comprising of a variety of mixed use-built forms. The revised building footprints allow for the articulation and modulation of building forms which can facilitate good design outcomes; achieve amenity outcomes including solar access and cross ventilation and support green strategies focused around reducing energy consumption. It is considered that the alternative control proposed provides flexibility that will promote the orderly and feasible development of each individual development lots and responds to the proposed vision and future character of the area.
4.2.3 Building Setbacks and Separation	The street setbacks referenced in 4.2.3 (PO1) are replaced by the street setbacks at Section 7.3 of the Master Plan. The solar access benchmark solutions referenced in 4.2.3 (PO2) are replaced by the solar access requirements of Section 7.7 of the Master Plan.	he Master Plan sets out alternative benchmark solutions to setbacks with more detailed site-specific setbacks for the Bradfield City Centre site. The building and ground level street setbacks proposed under Section 7.3 of the Masterplan respond to the street hierarchy and urban context of the site and make allowances for the provision of tree canopy, deep soil, and landscape zones. Complementary to this, building envelopes have been established and provide appropriate building separation that responds to the site context, building use, orientation, and street network. It is considered that the alternative setback control provides the necessary setbacks to maximise efficient use of land where amenity in the public domain is not reduced. Solar The Master Plan proposes to amend the current solar controls that apply to the site and introduces an additional control which applies to local

		parks. Presently, the DCP requires in mid-winter a minimum of 3 hrs solar access between 9am and 3pm on the 21st June to 70% area of open space. This is not achievable for local parks and will significantly restrict density and positive built form outcomes. For this reason, the Master Plan proposes an alternative control for local parks specific to the Bradfield City Centre. The additional control for local parks proposes that they achieve a minimum of 3 hours direct sunlight between 9am and 3pm on the 21st of June to a moving 50% area of open space.
5.1 Road Network and Design	The local road cross sections referenced in 5.1.1 (PO1) are replaced by the cross sections in Section 10 of the Master Plan.	The master plan proposes amendments to the Street Hierarchy Map in the Aerotropolis Precinct Plan. Several street sections have been further refined and additional street types have been provided to offer greater diversity and achieve the vision of a pedestrian - focussed, safe and sustainable movement network within the Bradfield City Centre. The revised cross sections reflect the changes to the Precinct Plan and ensure consistency across the Planning Framework.
5.2.2 Amenity and Sustainability	The benchmark solution for gross building footprint at Section 5.2.2 (PO2) is replaced with Section 7.6 of the Master Plan.	The maximum gross footprint control for a residential tower above 5 storeys is 650 sqm under clause 5.2.2 (PO2) of the DCP. The master plan proposes that the maximum gross footprint for a residential tower above five storeys should be 750sqm. The proposed amendment to the existing gross footprint is appropriate given the master plan site will facilitate a new city centre comprising of a variety of mixed use-built forms, including residential flat buildings. The revised building footprints allow for the articulation and modulation of building forms which can facilitate good design outcomes; achieve amenity outcomes including solar access and cross ventilation and support green strategies focused around reducing energy consumption. It is considered that the alternative control proposed provides flexibility that will promote the orderly and feasible development of each individual development lots and responds to the proposed vision and future character of the area.

5.2.3 Building Setbacks	The front / street setbacks referenced in 5.2.3 (PO1) are replaced by the street setbacks at Section 7.3 of the Master Plan.	The Master Plan sets out alternative benchmark solutions to setbacks with more detailed site-specific setbacks for the Bradfield City Centre site. The building and ground level street setbacks proposed under Section 7.3 of the Masterplan respond to the street hierarchy and urban context of the site and make allowances for the provision of tree canopy, deep soil, and landscape zones. Complementary to this, building envelopes have been established and provide appropriate building separation that responds to the site context, building use, orientation, and street network. It is considered that the alternative setback control provides the necessary setbacks to maximise efficient use of land where amenity in the public domain is not reduced.
6.1 Social and Cultural Infrastructure	This section sets out additional controls relating to social and cultural infrastructure requirements for Bradfield.	The additional control will provide a coordinated approach to Social and cultural infrastructure within the Bradfield City Centre.

11.2.2 Justification for proposed additions to Phase 2 DCP

Under the Land Use and Structure Plan of the Precinct Plan, the Bradfield City Centre is identified as Commercial Core – Mixed Use and is strategically located in the heart of the Aerotropolis.

The site has been identified as a metropolitan centre, that is framed around the Metro Station and promotes high density-built forms, located within a 400m walking radius within the mixed-use zone; and has been designed to prioritise high pedestrian movement and active transport within the Aerotropolis Core through infrastructure provision and amenity in the street network and the blue- green grid.

To deliver on the vision and objectives set out in the Aerotropolis Planning Framework, consideration has been given to prioritisation of the delivery of urban outcomes to ensure function and activation, whilst applying alternative solutions for the city to enable land uses to evolve and facilitate high density-built forms within the Bradfield City Centre.

The Bradfield Master Plan has been prepared as part of the master plan application. The Bradfield Master Plan provides a place-based vision, objectives, and development controls to guide future development in Bradfield City Centre. This includes alternative benchmark solutions and additional controls to those in the wider Aerotropolis DCP.

It is envisaged that the Bradfield Master Plan will form part of the Western Sydney Aerotropolis Development Control Plan Phase 2 (Aerotropolis DCP), Justification for the proposed addition to the Aerotropolis DCP is provided below.

- The Bradfield Master Plan will complement and expand on the existing controls by providing place-based development controls to guide future development in Bradfield City Centre. This includes alternative benchmark solutions and additional controls to those in the Phase 2 DCP.
- The proposed amendments to the Phase 2 DCP will not set a precedent in the Aerotropolis as the outcome is restricted to the Bradfield City Centre - Master Plan site within the commercial core/ mixed use which is identified within the Precinct Plan as the primary centre of the Aerotropolis and a core metropolitan centre.
- The proposed new controls are appropriate given the nature of the site. The site is the core of all Aerotropolis activities, and the proposed new controls respond to the vision of a new city centre development and encourage the delivery of high-density urban forms and land uses envisioned under the Precinct Plan.

Overall, the new controls proposed align with the strategic intent of the Aerotropolis Precinct, achieve the original objectives of the Phase 2 DCP and are compatible with the context and future character of the site.

It is understood that these proposed additional controls will be inserted via a schedule into the Phase 2 DCP subject of assessment and approval. **Table 18** provides a summary of the additional controls and benchmark solutions sought for approval under the Master Plan.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

Table 18 - Proposed Phase 2 DCP Amendments

Provision	Justification, rationale, and relationship to Phase 2 DCP
Height / floor space distribution	Additional controls to guide the distribution of height and built form within the Master Plan Site and to supplement the controls in the Aerotropolis Precinct Plan.
Street Setbacks	Alternative benchmark solutions to establish street setbacks specific to the Master Plan Site.
Street Wall heights	Additional controls to define the podium and upper-level setbacks within the Master Plan Site.
Building Footprints	Alternative benchmark solutions to establish suitable for residential and commercial footprints.

Provision	Justification, rationale, and relationship to Phase 2 DCP
Activation	Additional controls to encourage street activation in suitable locations.
Solar Access	Alternative benchmark solutions for reduced solar access to pocket parks, whilst maintaining solar access benchmarks to district / regional open space.
Building Materiality	Additional controls to guide building design and materiality in the Master Plan Site.
Canopy Cover / deep soil	Alternative benchmark solutions to allow for reduced canopy cover / deep soil within development Master Plan Sites whilst maintaining these controls across the Master Plan Site through increased requirements within open space and streets.
Public art	Additional control requiring future development to demonstrate consistency with Bradfield City Centre Art and Cultural Strategy.
Sustainability	Additional sustainability controls including requirements for green roofs and facades.
Precinct initiatives	Additional controls to require consideration of innovation within the Master Plan Site relating to Building innovation, Circular economy, Passive heating and cooling, Smart place, Wind impacts.
Movement	Alternative benchmark solutions for the design of the street network including alternative street cross sections.
Public domain and open space	Additional controls to guide the design and locations of the public domain and public open space network including concept plans for each space
Social and Cultural infrastructure	Alternative benchmark solution detailing social and cultural infrastructure to be delivered in Bradfield in place of reference to the benchmarks identified in the Western Sydney Aerotropolis Social Infrastructure Strategy (January 2022).
Staging and infrastructure delivery	Additional controls detail the proposed staging of development in the Master Plan Site and how this aligns with infrastructure delivery

12 Assessment against the relevant planning framework

This Master Plan Application has provided an assessment of the Master Plan against the relevant planning framework. In summary assessment has been undertaken in respect of:

- *Environmental Planning and Assessment Act 1979*
- *Environmental Planning and Assessment Regulation 2021*
- *Biodiversity Conservation Act 2016*
- *Contaminated Land Management Act 1997*
- *Heritage Act 1977*
- *National Parks and Wildlife Act 1974*
- *Rural Fires Act 1997*
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*
- *State Environmental Planning Policy (Planning Systems) 2021*
- State Environmental Planning Policy (Precincts – Western Parkland City) 2021
- *State Environmental Planning Policy (Resilience and Hazards) 2021*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*
- Greater Sydney Region Plan: A metropolis of Three Cities
- Western City District Plan
- Western Sydney Aerotropolis Plan
- Western Sydney Aerotropolis Precinct Plan
- Western Sydney Aerotropolis Development Control Plan – Phase 2.

This assessment has considered that the proposed Master Plan is generally compliant with the relevant planning framework, where non-compliances and amendments have arisen these have been justified within Master Plan Application and the provided appendices.

The Master Plan does not propose permanent development in the existing 60m wide Special Purposes 2 (SP2) Infrastructure Zone corridor. A decision regarding future rail infrastructure in the corridor is the subject of review by Government.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

A summary of the technical appendices and the Environmental Impact Assessment is provided within **Section 12**.

13 Environmental Impact Assessment

13.1.1 Aviation Impact Assessment

An Aviation Impact Assessment (**Appendix J**) was prepared by AECOM to accompany the Master Plan Application and to address the relevant Secretary's Master Plan Requirements.

The assessment considered the Western Sydney Aerotropolis and Bradfield City Centre Master Plan against the National Airports Safeguarding Framework (NASF) which addresses the protection and safeguarding guidelines and community amenity considerations for airports.

The Assessment outlined that due to the location of Bradfield City Centre in relation to the Western Sydney Airport (situated over 2 km away from the airport), the SW-NE orientation of the proposed parallel runways for the airport and the anticipated flightpaths) it is not likely to be impacted by aircraft operations or noise, potential windshear, or lighting distractions to airport operations.

Under the Western Parkland City SEPP Obstacle Limitation Surface Map, the Master Plan Site has a height of 125.5m. Any future developments above this height will require referral to the Western Sydney Airport to assess potential impacts on aviation operations.

An anticipated impact to be mitigated is the potential of aircraft wildlife strikes. mitigation options and recommendations have been developed to help manage wildlife hazards and through complying with processes embedded in the planning framework.

Mitigation measures and recommendations in relation to Bradfield City Centre Master Plan and the NASF requirements are provided in the Aviation Impact Assessment.

13.1.2 Wind Impact Assessment

A Pedestrian Wind Environment Review (**Appendix R**) was prepared by Windtech to accompany the Master Plan Application and to address the relevant Secretary's Master Plan Requirements.

The assessment of the indicative built form for Bradfield City Centre Master Plan against the principal wind directions indicates that the predominant medium-rise buildings are expected to provide effective wind shielding to the direct winds from the prevailing directions.

The potential impacts can be summarised as:

- Building Density – It is expected that grouping of the building height would assist in mitigating the potential reattachment flows over the proposed buildings and thus minimising the impact of the downwash effect off the taller building façades. The down wash effect will be further mitigated through the tower component incorporated into the design of taller buildings. However, the southern perimeter of the central areas of the Master Plan Site may be subject to potential wind impacts in these areas act as a barrier against the prevailing south-westerly winds, including direct and side-streaming wind effects along the building façade.
- Road Alignment - The provision of kinks, non-uniform layout, and misalignment with prevailing wind direction in the design of roads minimise the potential for wind channelling. The provision of wider transit roads on the northern boundary, the north-south corridor through the centre of the precinct and the east-west extension of the existing Whitaker Road, with medium-rise buildings and street trees will minimise the

strength of funnelling events through built-up areas. Increased building density and narrower city and local streets will increase susceptibility to funnelling wind effects.

- Open Spaces - Due to the size of the open spaces, there is susceptibility for the south-westerly winds to reform strength as they travel towards the central and south-eastern areas of Bradfield City Centre Master Plan Area.

The results of this assessment indicate that the Master Plan Site benefits from the shielding provided by the indicative built form within Bradfield City Centre Master Plan Area. However, there are some areas that are likely to be exposed to stronger winds that can have an impact on the local wind amenity.

It is expected that the wind effects can be mitigated, and local wind conditions further enhanced in these areas with the consideration of the mitigation measures and recommendations within the Pedestrian Wind Environment Review.

13.1.3 Air quality Impact Assessment

An Air Quality Impact Assessment (**Appendix Q**) was prepared by Todoroski Air Services to accompany the Master Plan application to investigate the potential air quality effects that may arise because of Bradfield City Centre Master Plan.

Road traffic emission is likely to be a source of air pollution in Bradfield City Centre in the future. The road network is structure to provide access to each area within the Master Plan Site with a main transport corridor the north.

The access through the road network is expected to enable good traffic flows with reduced idling times to minimise the generation of traffic related air emissions. It is not expected to see a high proportion of heavy vehicles travelling through the city centre and past more sensitive areas such as the residential areas. The amount of vegetation and trees positioned along the road network in Bradfield City Centre Master Plan will result in an improvement of air quality as trees absorb some air pollution.

The building design and built form of Bradfield City Centre Master Plan provides variability and a discontinuous façade which would allow for cross wind flows around and between buildings. The layout permits the design of buildings so living and workspaces such as bedrooms and offices do not face air emission sources, such as roadways, with cleaner air from central areas of the building directed into the building rather than from the side of the air emission source side.

The initial development in Bradfield City Centre Master Plan will provide a range of uses including Advanced Manufacturing Research Facilities in the Enterprise zone. This development can have some potential for air emissions from various activity and would need to be considered on an individual basis, albeit this is not expected to be significant compared to other types of industry. Similarly, any future development in Bradfield City Centre need to consider their potential for air quality impacts to ensure that they can comply with the relevant regulatory requirements.

Greenspaces within Bradfield City Centre Master Plan would act as buffers between air emission sources and sensitive land uses. Greenspaces also promote good air quality as trees can absorb air pollution and green areas also reduce heat generation that can affect air pollutant transformation.

The Master Plan incorporates a layout which is designed to reduce effects of air emissions from road traffic through position of major transport corridors relative to sensitive uses, promotion of good air flow throughout Bradfield City Centre. The design of Bradfield City Centre Master Plan has considered the various air quality objectives in the development control plan for the Western Sydney Aerotropolis and would likely see these objectives being achieved.

Mitigation measures and recommendations in relation to Bradfield City Centre Master Plan and the air quality impacts are provided in the Air Quality Impact Assessment (**Appendix Q**).

13.1.4 Biodiversity Strategy and Impact Assessment

A Biodiversity Strategy and Impact Assessment (Biodiversity assessment) (**Appendix M**) was prepared by Biosis to accompany the Master Plan application and to address the relevant Secretary's Master Plan Requirements.

Consistent with the Aerotropolis Precinct Plan and the Growth Centres Bio-certification, development within the Master Plan Site will potentially result in removal of 23.51 ha of native vegetation which includes areas of potential threatened flora and fauna habitat. The impacts are detailed within the Biodiversity Strategy and Impact Assessment (Biodiversity assessment).

All impacts to native vegetation and threatened flora and fauna are restricted to areas which have been granted biodiversity certification. As such, further assessment in the form of Tests of Significance is not required. Impacts do not trigger the Biodiversity Offset Scheme (BOS) and subsequent assessment in the form of a Biodiversity Development Assessment Report (BDAR), or provision of Species Impact Statement (SIS). No referral for impacts to Matters of National Environmental Significance are required.

Impacts to Moore Gully and its associated key fish habitat buffer and the unnamed watercourses across the study area will require liaison with the fisheries division of the Department of Primary Industries (DPI) and the Natural Resources Access Regulator (NRAR). The VRZ of these watercourses will need to be observed and a controlled activity permit secured for any works within 40 m of these features.

Recommendations to aid with the avoidance and/or mitigation of impacts to ecological values and offsetting options for unavoidable impacts because of the proposed Master Plan are provide within the Biodiversity Strategy and Impact Assessment (Biodiversity assessment) (**Appendix M**).

13.1.5 Bushfire Strategy and Impact Assessment

A Strategic Bushfire Study (**Appendix Y**) was prepared by Eco Logical Australia Pty Ltd to accompany the Master Plan application and to address the relevant Secretary's Master Plan Requirements.

The Study Area is situated within a broader landscape comprised predominantly of grassland vegetation, with patches of woodland and narrow corridors of forested wetland vegetation present along the riparian corridors. However, it is expected that revegetation and modification is likely to occur throughout the Master Plan area to reflect proposed land uses.

As this assessment is in relation to a Master Plan application, a detailed assessment of proposed roads is not possible, however, it is anticipated that access roads will be compliant with the requirements of Planning for Bushfire Protection (PBP) at the relevant Development Application Stage.

The Master Plan provides opportunities for land use, there is opportunity to accommodate perimeter roads within the developable area adjacent to final bushfire hazards, or by adapting the current open space interface for the provision of perimeter roads. The proposed road network provides perimeter arterial and sub-arterial road access to the west, north and east along with a southern connection which would provide egress options for future occupants as well as ingress for emergency services and enable provision for APZs in these areas.

If off-Master Plan Site evacuation being necessary during varying stages of activation, it is expected that the existing and proposed arterial and sub-arterial roads will be available to provide multiple route options to nearby Neighbourhood Safer Places (NSPs), new NSPs or other evacuation points.

No key constraints associated with the ability of emergency services to carry out fire suppression in a bushfire emergency, because of the planned future development, are anticipated. The compliance of these aspects will be assessed for each future development against the requirements of PBP and the Master Plan is therefore not deemed to facilitate inappropriate development regarding the adequacy of emergency services.

Mitigation measures and recommendations in relation to Bradfield City Centre Master Plan and the bush fire impacts are provided in the Strategic Bushfire Study.

13.1.6 Flooding Impact Assessment

A Flooding Impact Assessment (**Appendix K**) was prepared by Advisian to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements.

The impact of the Master Plan was assessed by comparing the post-development model results against the model results derived for existing conditions. The comparison shows that the development as currently proposed will result in some off-Master Plan Site (in areas identified in the SEPP) increases to estimated peak 1% AEP flood levels and flow velocities for existing conditions. Though, these increases are limited to three areas; one along Moore Gully; along Thompsons Creek and a downstream location along the eastern edge of the Master Plan Site (in areas identified in the SEPP).

The Master Plan contemplates development within the mixed use and enterprise zones which are above the 1% AEP flood Level.

Due to the limited extent of the impacts elsewhere along Moore Gully, it is anticipated that they can be mitigated through further refinement of the post-development land surface near the precinct boundaries as well as implementation of the stormwater drainage network that is proposed for future development across the Master Plan Site.

Mitigation measures and recommendations in relation to Bradfield City Centre Master Plan and the Flooding impacts are provided in the Flooding Impact Assessment.

13.1.7 Aboriginal Cultural Heritage Assessment Report

An Aboriginal Cultural Heritage Assessment Report (ACHAR) (**Appendix U**) has been prepared by Extent Heritage Pty Ltd to accompany the Master Plan Application and to the relevant requirements of the Master Plan Requirements.

The assessment found:

- A total of sixteen Aboriginal Sites were identified in the study area.
- The test excavation program investigated three PADs — ACIF01 (AHIMS ID 45-5-5480), Moore Gully (AHIMS 45-5-5492), and Thompsons Creek (AHIMS ID 45-5-5491) — and one comparative area expected to have low potential for Aboriginal archaeology.
- All Master Plan Sites were determined to have low significance overall, except for TP 114 in Moore Gully (AHIMS ID 45-5-5492) and TP 15 in Thompsons Creek (AHIMS ID 45-5-5491).
- In respect of the Master Plan, the archaeology located within ENV will be protected from harm. These comprise all of B 20 (AHIMS ID 45-5-2622), part of ACIF01(AHIMS ID 45-5-5480), part of Moore Gully (AHIMS ID 45-5-5492), part of Thompsons Creek (AHIMS ID 45-5-5491).
- All surface artefacts identified within the study area during the surface survey and test excavation program have been determined to hold low scientific value.
- TP 114, located within Moore Gully (AHIMS ID 45-5-5492), would be harmed by future proposed development. As a result, salvage excavations would be required to fully investigate the archaeology associated with this test pit.
- TP 15, located within Thompsons Creek (AHIMS ID 45-5-5491), would be conserved based on the current Master Plan. If design changes result in any impact within a 50-metre buffer of TP 15 (located at 291321.887 easting and 6243816.007 northing), salvage excavations would be required.
- Aboriginal Sites impacted by the development within the Master Plan Site which is envisaged by the Master Plan and consistent with the Aerotropolis Precinct Plan will require an Aboriginal Heritage Impact Permit.

Mitigation measures and recommendations in relation to Bradfield City Centre Master Plan and Aboriginal Cultural Heritage Assessment Report (AHCAR) are provided in the ACHAR (**Appendix U**).

13.1.8 Statement of Heritage Impact

A Statement of Heritage Impact (SOHI) (**Appendix W**) was prepared by Extent Heritage Pty Ltd to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements. The SOHI addresses the impacts of the Master Plan to non-Aboriginal heritage.

The SOHI determined that the study area is not identified as a heritage item on any statutory or non-statutory registers. The statutory registers checked as part of this reporting include the World Heritage List, National Heritage List, Commonwealth Heritage List, State Heritage Register (SHR), relevant Local Environmental Plans and State Environmental Planning Policies, as well as non-statutory heritage registers including the Register of the National Trust (NSW). The study area does not meet the criteria for local or State significance.

The proposed works will not directly impact on any identified built heritage. An analysis of historical plans and historical aerial photographs demonstrates that the Master Plan Site was located within a portion of the former estate referred to as "The Retreat" and subsequently Kevin and then Kelvin Grove. The estate operated primarily as a grazing property until the early 1950s at which time it was purchased by the Commonwealth and functioned as the RBF Bringelly Receiving Station. The assessed potential for the presence of archaeological material associated with all post 1788 occupational phases of the Master Plan Site are low within the works footprint. It has been determined that any surviving remains are likely to have a low archaeological significance.

This SOHI also considered the potential impacts associated with the proposed Bradfield City Centre Master Plan in relation to the heritage in the vicinity. There are two local heritage items and two State heritage listed items in the vicinity of the proposed development: Kelvin, and the Church of the Holy Innocents. There will be no physical or visual change to the Church of the Holy Innocents or the two identified local heritage items due to the large distance of these items from the study area. Kelvin is located approximately 100 metres to the north-east of the study area. The impact on the views to and from this item is moderate given the significant change to setting that the Master Plan proposes. Nonetheless, any moderate impacts to the heritage significance of the SHR item Kelvin is considered acceptable in understanding the positive outcomes of the proposed development for the wider community.

The SOHI has recommended mitigation measures in respect of the Kelvin Grove State Heritage Item which is not located on the Master Plan Site. Future development will need to consider the height, bulk, scale, and material of new buildings. Recessive colours, adequate setbacks, the use of open space and landscaping are ways which the impacts to this heritage item can be mitigated in future development.

Mitigation measures and recommendations in relation to Bradfield City Centre Master Plan and European heritage impacts are provided in the SOHI (**Appendix W**).

13.1.9 Ground Conditions and Contamination Assessment

A Ground Conditions Report (Detailed Master Plan Site Investigation) was prepared by Environmental Resources Management Australia Pty Ltd (ERM) (**Appendix T**) to accompany the Master Plan Application and to address the Secretary's Master Plan Requirements.

In June 2021, a Preliminary Master Plan Site Investigation (PSI) was conducted to identify the historical uses and potential contamination within and surrounding the land area proposed to be the future Bradfield City Centre. The PSI recommended that a Detailed Master Plan Site Investigation (DSI) be conducted to further assess the potential presence of contaminated soil or groundwater.

In summary of the DIS assessment, field observations and the results of the collected soil, groundwater, surface water and sediment samples it has been deemed that the Master Plan Site is suitable for the land uses permitted under the National Environment Protection Assessment of Master Plan Site Contamination HIL-A criteria.

A Contamination Report (Master Plan Site Audit Report and Master Plan Site Audit Statement) (**Appendix AA**) has been prepared by JBS&G and including inputs by the NSW EPA. The Contamination Report provides the following:

- The Master Plan Site investigation works are considered to have met the requirements of the Contaminated Master Plan Sites: Guidelines for the NSW Master Plan Site Auditor Scheme (3rd Edition) (EPA 2017).
- The AMP (ERM 2022b) prepared for the Master Plan Site addresses the identified contamination issue.
- The auditor notes that the Master Plan Site management and validation procedures outlined in the AMP are considered appropriate to make the Master Plan Site suitable for the proposed uses.

13.1.10 Sustainability Assessment

A Sustainability Report (**Appendix L**) was prepared by Flux to accompany the Master Plan Application and to address the relevant Secretary's Master Plan Requirements and provide a sustainability framework.

The sustainability framework includes the following considerations:

- Address Climate Change.
- Finite Water Resources.
- Managing Waste to avoid landfill.
- A health environment.
- Resilience.
- Social Outcomes.

The sustainability framework includes the following commitments to mitigate potential future impacts:

- Targeting net-zero carbon emissions by 2030.
- Provide an unrestricted supply of water that is resilient to drought and floods and enables unrestricted use to activate blue/green connections and reduce reliance on potable water supplies.
- Minimise waste to landfill and promote circular economy initiatives that creates a symbiotic relationship between residential, commercial, and industrial land uses within Bradfield.
- Create a healthy environment for people and the natural ecology.
- Design to mitigate climate impacts including urban heat.
- Generate sustainable social outcomes through placemaking and community building.

These commitments will support the Master Plan Site as a six-star Green Star community. Accreditation will be pursued throughout future design and delivery phases.

Consideration will be given to the implementation of climate resilient infrastructure and technologies during detailed design and delivery stages.

A Corporate Sustainability and Resilience Strategy will be developed by WPCA to set out commitments to sustainability and resilience.

13.1.11 Integrated Water Cycle Management Report

An Integrated Water Cycle Management Report (**Appendix I**) was prepared by AECOM to accompany the Master Plan Application and to address the relevant Secretary's Master Plan Requirements.

There are six water bodies, small farm dams, within Bradfield City Centre Master Plan Site and surrounding Master Plan Sites. Desktop assessment of these dams concluded that they were likely for private water storage of the respective properties and played no formal role in the dynamics of the local catchment.

The Master Plan Site is a greenfield Master Plan Site with no existing formal drainage infrastructure present. Existing pipes and drainage infrastructure is present along the Northern Road to the south of the precinct and Badgerys Creek Road (being only culvert crossings) to the west. Currently, Badgerys Creek Road does not have kerb and gutter or a formal trunk drainage system. Presently there are culverts along Badgerys Creek Road. With the future upgrade of Badgerys Creek Road, it is expected that a formal drainage system will be

installed and direct water into the watercourse, rather than having uncontrolled discharge enter the Master Plan Site. Coordination of stormwater and flooding conditions in these areas will be required in future stages of design to mitigate any overlap in discharge requirements in interim development stages.

Moore Gully is classified as Strahler 4th Order Creek, with Thompsons Creek a 5th Order creek both with a 40m Vegetated Riparian Offset from the top of the bank.

The proposed Master Plan approach utilises regional-based infrastructure in the form of above-ground grassed bioretention basins and wetlands integrated within the proposed waterfront area along Moore Gully. In modelling, this approach demonstrates capacity to adequately meet hydraulic and hydrological targets for the Master Plan Site including pollutant reduction, peak flow discharges and water flow retention across the water cycle.

Future proposed drainage infrastructure can be constructed in a manner respecting the natural topography and existing catchment characteristics with minor deviations resulting from the presence of the Metro Station. The integration with existing Moore Gully and Thompsons Creek minimises ecological and riparian impact from overlapping requirements of water infrastructure but will require further design development to better adopt the future waterfront area and intended realignment of Moore Gully.

Mitigation measures and recommendations in relation to Bradfield City Centre Master Plan and water cycle management are provided in the Integrated Water Cycle Management Report.

13.1.12 Utility Infrastructure and Servicing Strategy

A Utility Infrastructure and Servicing Report (**Appendix H**) was prepared by AECOM to accompany the Master Plan Application.

The report compares the last two years of available and relevant planning advice with the current data available around Bradfield, reviews the currently available services and evaluates expected future demand. The report also identifies expected demand and potential utility amplifications required for the proposed Master Plan for the Master Plan Site and wider precinct development.

The Master Plan Site has the following demand calculations which provide estimates based on a ±15% range in development yields:

- Potable water between 14,400 – 19,500 kL/day (total demand reduced by Recycled Water uptake).
- Recycled water between 7,530 – 10,200 kL/day.
- Wastewater between 230 – 310 L/s.
- Electrical load between 172.41 – 233.26 MVA; and.
- Gas demand between 910,293 – 1,231,573 GJ/hour.

The following needs have been identified to support the Master Plan Site:

- Lead-in infrastructure upgrades for water (potable and recycled), wastewater and electrical supply are required.
- Gas and telecommunication networks have adequate capacity to provide upgrades pending formal applications.

Beyond 2026, received advice from utility authorities indicates that Bradfield City Centre can be fully serviced via business-as-usual processes, as the City Centre grows and evolves over the next 30 years.

13.1.13 Traffic Management Accessibility Plan Report

A Traffic Management Accessibility Plan Report (**Appendix G**) was prepared by AECOM to accompany the Master Plan Application and to address the relevant Secretary's Master Plan Requirements.

An implementation plan has been prepared for walking and cycling, public transport and the road network over the short, medium, and long term. Each implementation plan aims to define an impact, challenge or issue for walking and cycling, public transport and the road network in Bradfield City Centre.

In summary the Traffic Management Accessibility Plan Report provided analysis on the traffic projections for 2026, 2036 and 2056.

The adoption of maximum parking rates in the Phase 2 DCP have been applied. To ensure a future shift towards sustainable modes of travel is achieved, the minimum bicycle parking requirements within commercial areas, educational facilities as well as community, medical, recreational, and residential facilities need to be increased in quantity and be situated at easily accessible and safe locations.

Detailed impacts, mitigation measures and recommendations in relation to Bradfield City Centre Master Plan are provided in the Traffic Management Accessibility Plan Report (**Appendix G**)

13.1.14 Noise and Vibration Impact Assessment

A Noise and Vibration Impact Assessment (**Appendix R**) was prepared by WSP to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements.

A variety of noise and vibration legislation, standards, and guidelines exist to ensure that noise is kept in-balance with the social and economic value of industry to NSW, including the Western Parkland City SEPP.

In summary noise and vibration impacts related to aspects including Aircraft noise, Major Roads, Sydney Metro, and car parking has been assessed and anticipated impacts provided. This assessment includes detailed analysis of vibration impacts of the future transport corridor.

Detailed Mitigation measures and recommendations in relation to Bradfield City Centre Master Plan are provided in the Noise and Vibration Impact Assessment.

13.1.15 Earthworks

An Earthworks Report (**Appendix W**) was prepared by AECOM to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements.

The Earthworks Report provides the proposed earthworks design strategy for the Master Pan and demonstrate an option for conformance with performance outcomes. Various Master Plan Site investigations and studies by external parties were considered in the civil design of the Master Plan.

In summary the anticipated earthworks for Stages 1, 2a, 2b, 2c and 3 have been outlined within the Earthworks Report for Cut, Fill, and Balance and Import and Export.

Overall, the earthworks design has generally followed the existing contours on the Master Plan Site to minimise the cut and fill required. WPCA are targeting a cut to fill balance across the Master Plan Site through the detailed design stages.

The earthworks design approach has based its design its design input on the new Sydney Metro station finished levels to provide consistency between designs. The earthworks strategy aligns with Recognising Country principals while also providing an interface to the new Sydney Metro station.

13.1.16 Circular Economy

A Circular Economy (Waste and Services) Report (**Appendix CC**) was prepared by WSP to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements.

The Circular Economy (Waste and Services) Report provides an overview of the circular economy approach in the global and local context to provide the strategy for the Master Plan Site. It identifies circular economy opportunities and sets targets for waste generation reduction informed by best practice.

The Circular Economy (Waste and Services) Report outlines the following for the Master Plan Site:

- Targets for waste generation reduction (operational and construction).
- Solutions to avoid waste generation for the outset.
- Dedicated food organics management solution.
- Minimising waste vehicles movements.
- Integration of community education through a circular economy hub.
- Circular sharing initiatives.
- Opportunities for last mile logistics and industrial symbiosis.

The long-term circular economy strategy for the Master Plan Site will be refined and adapted as the Master Plan Site is developed over time.

13.1.17 Infrastructure Delivery

An Infrastructure Delivery Strategy (**Appendix V**) was prepared by WPCA to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements.

The Infrastructure Delivery Strategy outlines the following for the Master Plan Site:

- Identifies the infrastructure required to be delivered under the existing Western Sydney Aerotropolis contributions framework.
- Identifies mechanisms of delivery.
- Identifies who is likely to deliver the infrastructure.
- Identifies infrastructure priorities and staging.
- Outlines any changes in amount of infrastructure from the existing contributions framework relative to that proposed.
- Assists government and the community in understanding the infrastructure delivery task for the Master Plan Site.

The applicable Local Contributions Plan to the Master Plan Site is the *Draft 7.12 – Liverpool Council Aerotropolis Precincts Contributions Plan*. The Local Contributions Plan proposes the acquisition of one Master Plan Site within the Master Plan Site with an area of approximately 2.3ha. The proposed acquisition of the land within the Master Plan Site will be the subject of further discussions with Liverpool City Council within the context of the proposed Master Plan.

WPCA will deliver various elements of infrastructure as part of a works-in-kind agreement with Liverpool City Council.

The *Environmental Planning and Assessment (Special Infrastructure Contribution – Western Sydney Aerotropolis) Determination 2022* provides the state contributions framework that applies to the Master Plan Site. Future development within the Master Plan Site will be subject to the state contributions framework which will provide for various infrastructure to be provided within and outside of the Master Plan Site.

The Western Parkland City SEPP provides for acquisition of land within the Master Plan Site for a variety of different purposes including Stormwater infrastructure, Local open space and drainage and the Regional Park (Thompsons Creek). These acquisition processes will be undertaken by the relevant authority in consultation with WPCA.

Detailed recommendations in relation to Bradfield City Centre Master Plan are provided in the Infrastructure Delivery Strategy.

13.1.18 Housing Strategy

A Housing Strategy Statement Report (**Appendix BB**) was prepared by MacroPlan to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements.

The Housing Strategy Statement Report outlines the following for the Master Plan Site:

- Between 2021 and 2056, the population of the Western Parkland City is projected by DPE and TfNSW to rise by about 720,000 from 1.16 million to 1.88 million which will create the need for about an additional 300,000 dwellings.
- The Bradfield City Centre has the capacity to deliver 10,000 apartments making a significant contribution to total supply and to diversifying housing supply within the Aerotropolis. Consistent with Objective 9 of the Western Sydney Aerotropolis Plan, Bradfield City Centre optimises the opportunity to provide diverse, affordable housing that is well located near employment opportunities and transport.
- It is estimated that there will be demand for about 66,000 apartments, accounting for 22% of total dwelling demand in the Western Parkland City over the years between 2021 - 2056.
- It is estimated that the current potential supply of apartments in the Local Government Areas (LGAs) in Western Parkland City is 27,000-54,000, which may be adequate in the short term but not in the long term.

Overall, the Master Plan will play a significant role in the provision of housing (including affordable housing). to support the overall vision for the Aerotropolis relating to housing.

13.1.19 Arts and Culture Strategy Report

An Art and Culture Strategy Report (**Appendix X**) was prepared by Artificer Projects to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements.

The Art and Culture Strategy Report provides that a consistent approach to decision-making and activation is adopted throughout the Master Plan Site across its development, construction, and management phases to achieve the desired place identity for visitor engagement regarding arts and cultural activities.

The Art and Culture Strategy Report provides an approach to develop high quality public art works and projects. WPCA will work with the relevant authorities to prepare funding models for arts and culture.

Future art works and installations will highlight the First Nations significance of the Master Plan Site. These will be undertaken by Aboriginal and Torres Strait Islander artists and the local Aboriginal and Torres Strait Islander community to express and interpret a contemporary re-imagining of a Welcome to Country and First Nations living culture.

13.1.20 Smart Cities Assessment

The Smart Cities Implementation Plan prepared by AECOM (**Appendix F**), has been prepared to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements.

The Smart Cities Implementation Plan includes two key areas for focus for the long-term development of the Master Plan Site:

- Planning for growth and changing technologies, "future-proofing" to the extent possible based on current knowledge and forecasts.
- Enabling innovation and choice – investing where there are market failures or drivers to remove inhibitions to, and encourage, smart cities and broader technologies to flourish in Bradfield through private market provision of choice and quality.

The Smart Cities Implementation Plan includes a Smart City technical Framework which covers the following key areas:

- Enabling Connectivity Chouse and Change
- Embedding Technology for Better City Function
- Harnessing Data Effectively and Responsibly.

The Smart Cities Implementation Plan sets out set of short-, medium- and long-term strategies that ensure the public domain and future users can comply with the Phase 2 DCP and the Aerotropolis Precinct Plan. Longer term strategies are provided to ensure that the continued target of a highly connected 22nd century city is realised.

13.1.21 Social Impacts

A Social Infrastructure Strategy (**Appendix N**) was prepared by GHD to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements.

The Social Infrastructure Strategy report outlines the future community and the needs of different users including residents, workers, and visitors, within the Master Plan Site to inform social infrastructure provision recommendations and considerations to enhance social sustainability.

The recommendations for social infrastructure provision have been determined through a needs assessment covering existing need, identified needs, demographic need, and comparative need. It is anticipated that the needs of the community will change over time as Bradfield and the broader Aerotropolis is developed. The cumulative impact of this increasing population will need to be continuously monitored to enable infrastructure to respond to the changes in demand and be provided in a timely manner. **Table 19** provides an overview of the social infrastructure recommendations.

Table 19 – Overview of social infrastructure recommendations

Facility	Recommended infrastructure (by 2056)	Justification of need
Education		
Education	Public Primary School, including spaces for specialised learning	Required to accommodate both the Master Plan Site and Aerotropolis Core precinct demographic needs. Identified in the Place Based Infrastructure Compact (PIC).
	Public High School, including spaces for specialised learning	Required to accommodate both the Master Plan Site and Aerotropolis Core precinct demographic needs. Identified in the Place Based Infrastructure Compact (PIC).
	Innovation outreach centre (consider co-location with public high school)	Consultation with NSW Department of Education identified opportunity to provide an Innovation outreach centre with a focus on aerospace and aeronautics to increase the learning opportunities for the wider Greater Sydney student population.
	1 x Permanent TAFE/VET facility	Committed in the Western Sydney City Deal.
	1x Multiversity Campus/ maker space facilities collocated with compatible industry and community facilities	Committed in the Western Sydney City Deal.
Community & Culture		

Facility	Recommended infrastructure (by 2056)	Justification of need
Health	1 x Community health centre / IHHub	Consultation with NSW Department of Health identified the opportunity to provide community health facilities in the Aerotropolis Core after the year 2031.
	1 x Specialised Aboriginal community health facility	The Draft Western Sydney Aerotropolis Aboriginal Engagement Summary Report (GHD, 2020d) identified the need for specific health facilities for Aboriginal residents in the Aerotropolis and wider Western Parkland City.
Emergency services	1 x Justice Precinct with a co-located police station and courthouse	Required to accommodate both the Master Plan Site and Aerotropolis Core precinct demographic needs. Identified in the Place Based Infrastructure Compact (PIC).
Community facilities	1 x Local community space	Required to accommodate the Master Plan Site demographic needs.
	1 x District community centre (co-located with the District/State satellite library)	Required to accommodate both the Master Plan Site and Aerotropolis Core precinct demographic needs. Consultation with Liverpool City Council and Create NSW indicated the aspiration for a multifunctional community centre.
Childcare	1 x Public childcare centre (min 100 places)	Required to accommodate the Master Plan Site demographic needs.
	1 x Specialised Aboriginal childcare centre	The Draft Western Sydney Aerotropolis Aboriginal Engagement Summary Report (GHD, 2020d) identified the need for specific childcare facilities for Aboriginal residents in the Aerotropolis.
	~10 x Private childcare centres (total 499 places)	Required to accommodate the Master Plan Site demographic needs.
	~10 x Private childcare centres (total 499 places)	Required to accommodate the Master Plan Site demographic needs.
	2 x Private OSCH centres (total 198 places)	Required to accommodate the Master Plan Site demographic needs.
Aged Care	Consider appropriate planning controls to allow future development of aged care facilities. Provision of approximately 136 x Moderate to high care needs places, 163 x Low care needs places and 7 x Short term restorative care places located near the IHHub.	Required to accommodate the Master Plan Site demographic needs.
	Provision of approximately 68 x Community care packages delivered from the IHHub	Required to accommodate the Master Plan Site demographic needs.

Facility	Recommended infrastructure (by 2056)	Justification of need
Cultural facilities	1 x Local cultural facility (i.e., gallery, studio, or museum)	Required to accommodate the Master Plan Site demographic needs.
	1 x Aboriginal Cultural Centre	The Draft Western Sydney Aerotropolis Aboriginal Engagement Summary Report (GHD, 2020d) identified the need for a major cultural facility to support cultural practice for Aboriginal residents in the Aerotropolis and wider Western Parkland City.
	1 x Cultural Performance Centre	Required to accommodate both the Master Plan Site demographic needs and wider Western Parkland City. Identified in the Place Based Infrastructure Compact (PIC).
Civic Spaces		
Sport and recreation facilities	2 x Playing fields (i.e., hockey and athletics)	Required to accommodate the Master Plan Site demographic needs.
	3 x Multipurpose sport courts	Required to accommodate the Master Plan Site demographic needs.
	1 x District sports field (2 x rectangles and 1 x oval)	Required to accommodate both the Master Plan Site and Aerotropolis Core precinct demographic needs.
	1 x Indoor sports facility	Required to accommodate both the Master Plan Site and Aerotropolis Core precinct demographic needs.
	1 x Indoor aquatic/swimming facility	Required to accommodate both the Master Plan Site and Aerotropolis Core precinct demographic needs.
	1 x Youth focused outdoor recreation facility	Required to accommodate both the Master Plan Site and Aerotropolis Core precinct demographic needs.
Parks and open space	Up to 8 x Local parks	Required to accommodate the Plan Master Plan Site demographic needs.
	2 x District parks	Required to accommodate both the Master Plan Site and Aerotropolis Core precinct demographic needs.
	1 x Regional park (Moore Gully)	Required to accommodate both the Master Plan Site and Aerotropolis Core precinct demographic needs.

13.1.22 24 Hour Economy Strategy

A 24-Hour Economy Strategy Statement Report (**Appendix CC**) was prepared by MacroPlan to accompany the Master Plan Application.

The success of a 24-hour economy in the Master Plan Site is an important consideration in attracting a residential population, firms, and their workforces, and (visitors in) short-term accommodation (hotels/serviced

apartments) and students in educational institutions. The projected growth in Bradfield City Centre population, employment, visitor, and student numbers outlined in the Masterplan supports the development of a 24-hour economy and a vibrant night-time economy.

The Master Plan is consistent with the objectives to lead to a successful 24-hour economy, recommendations in relation to Bradfield City Centre Master Plan are provided in the 24-Hour Economy Strategy Statement Report.

13.1.23 Economic Impacts

An Economic Strategy Technical Report (**Appendix O**) was prepared by SGS Economics to accompany the Master Plan Application and to address the relevant requirements of the Secretary's Master Plan Requirements.

The Economic Strategy Technical Report outlines:

- Economic and market drivers that will influence the future land use context in the Aerotropolis are diverse, and while some land uses will be immediately viable some will require pre-requisite conditions before they can be delivered.
- The Master Plan Site provides for capacity for between 20,000 +jobs in the long-term providing a key anchor centre for the development of Aerotropolis and broader Western Sydney.
- The Master Plan contributes approximately half of the jobs targeted for the Aerotropolis Core precinct with a focus on knowledge intensive jobs.

Overall, the Master Plan is intended to facilitate the growth of the centre over time. The Master Plan has established the following three planning horizons provided in **Table 20**

Table 20- Planning & Development Horizons

Phase	Indicative Timeframe	Estimated employment	Estimated residential population	Estimated Gross Floor Area (cumulative)
Immediate	2026	1,000 - 1,200 jobs	0 residents	48,500sqm
Medium-term	2036	8,000 - 8,300 jobs	3,000 - 3,100 residents	341,000sqm
Long-term	2056	20,000 – 24,000 jobs	15,000 – 15,200 residents	1,258,000 sqm

Note: The table above is an estimate of the population and employment forecast used for the purposes of modelling only.

The master plan has the capacity to accommodate ~10,000 residential dwellings. In accordance with NSW Government policy a proportion of the residential dwellings will be affordable housing. The timing and delivery of residential dwellings will be subject to market demand and future master plan reviews that consider the impact of additional population on the scope and timing of social and physical infrastructure.

Detailed recommendations in relation to Bradfield City Centre Master Plan are provided in the Economic Strategy Technical Report.

14 Consultation

14.1 Technical Assurance Panel

The Technical Assurance Panel (TAP) process has led to a refined and greatly improved Master Plan. The TAP process has allowed for the design evolution of the Master Plan, the Master Plan incorporates detailed feedback from the TAP membership which included State Agencies and Local Councils.

The TAP process has allowed for issues to be resolved and included within the Master Plan which has been lodged for Statutory assessment. WPCA and the project team have collaborated at length with the TAP as part of the TAP Milestone Agreements.

14.1.1 Milestones Agreements

Detailed consultation has been undertaken with the TAP during the preparation of the Master Plan Application. The following **Table 21** provides the Milestones Agreement and the meeting dates between WPCA and the TAP.

Table 21 – Milestone Agreements

Aspect	Dates
WPCA issue request to be Master Planner	11/04/2022
DPE provide approval for WPCA to be Master Planner and issue Master Plan requirements	11/04/2022
TAP Meeting 1	8/11/2022
TAP Meeting 2	14/12/2022
TAP Meeting 3	21/03/2023
TAP Meeting 4	5/05/2023
TAP Meeting 5	3/07/2023
TAP Meeting 6 - Finalise Master Plan application - Master Plan Submission	14/08/2023

14.2 Other Consultation

14.2.1 Aboriginal Engagement

An Aboriginal Engagement Outcomes Report (**Appendix U**) has been prepared by GHD and Zion Engagement and Planning. Detailed engagement and consultation activities were undertaken during the preparation of the Master Plan and to the address the relevant requirements of the Secretary's Master Plan Requirements.

Consultation was undertaken with the following stakeholders:

- Dharug (Darug/Durug) and Dharawal Traditional Custodians.
- WPCA Koori Perspectives Circle.
- Government Architect NSW.

Two phases of engagement were undertaken being Phase 1 and 2. Phase one engagement activities were undertaken between October 2022 and December 2022. The purpose of the Phase 1 engagement was to build relationships with Dharug Traditional Custodians and provide opportunity for Traditional Custodians to share their aspirations and interests in the project. A total of 27 Traditional Custodians participated during the engagement activities during phase 1.

The Phase 2 engagement activities were undertaken with Dharug and Dharawal Traditional Custodians between March 2023 and May 2023. The purpose of the Phase 2 engagement was to build relationships with Dharug and Dharawal Traditional Custodians and establish guiding designing with Country principles and to identify opportunities for ongoing engagement and collaboration with Traditional Custodians. A total of 16 Traditional Custodians participated during the engagement activities during Phase 2.

The key matters that arose during the consultation can be summarised as follows:

- Master Plan documentation including use of terminology and use of language.
- Landscaping and urban design including, restore waterways and ecology, engaging with Country, protecting native flora and fauna, Bunya trees, connections for fauna, respect of water, Tree maintenance and tree canopy.
- Ridge Park including potential educational purposes of the park and privacy issues.
- Lighting and solar access including, Sky Country (night sky), light pollution, solar access, and overshadowing.
- Art Strategy including, prioritise local Dharug artists, planting treatments, use of language, sightlines, and navigation.
- Cultural space including, Space for cultural practice, privacy, operation, and management and establishing a network.

The Aboriginal Engagement Outcomes Report outlines that all matters raised by stakeholders were considered to have been adequately addressed within the Master Plan Application or in the accompanying appendices.

14.2.2 Community and Landowner Engagement

A Consultation Outcomes Report (**Appendix DD**) has been prepared by WPCA Communication and Engagement. Preliminary stakeholder and community consultation undertaken to inform the Master Plan Application. Outcomes of this consultation have been considered in the preparation of the Master Plan and respond to the Master Plan Requirements.

A wide-reaching information and promotion campaign focussed on targeting stakeholders, adjoining property owners and the local community to invite them to find more information about the master planning process and share their ideas. Information was also available to the public across Sydney through the project webpage.

A public facing web Master Plan Site was launched on 1 December 2022 to provide information and receive feedback about stakeholder and community ideas for Bradfield City Centre. There were 2049 total page views of the webpage from 1461 unique users when the page closed in March 2023.

Government and non-government stakeholders were contacted from Thursday 1 December 2022 via email and provided information, contact details for the project team and information about how to provide feedback.

Adjoining property owners were directly contacted via a letter on 16 November 2022 and offered a dedicated telephone line to a Neighbourhood Liaison Officer, where they could discuss the master planning process, arrange a one-on-one meeting, and provide feedback.

A newsletter was letterbox-dropped on 23 November 2022 to approximately 2,500 residences in the suburbs surrounding the new Bradfield City Centre, providing information about how to find more information and provide feedback.

A neighbourhood pop-up on Saturday 19 November 2023 to provide in-person discussion about the master planning process. The neighbourhood pop-up was part of the cross-agency engagement program and was held from 10am until 2pm at the Hubertus Country Club in Luddenham.

There was a total of 167 community members were directly engaged at community drop-in sessions in August and November 2022.

A total of 45 properties adjoining Bradfield City Centre Master Plan Site were visited during a doorknock conducted by WPCA in July 2022.

The key matters raised by these stakeholders has been deemed to be addressed within the Master Plan and the relevant appendices.

15 Conclusion

This Planning Report has been prepared in accordance with the Western Parkland City SEPP and Master Plan Guidelines that establish the optional master planning process for land within the Aerotropolis. It sets out the justification for the proposed statutory amendments applicable to the site to allow for future development within Bradfield City Centre.

The justification of strategic and site – specific merit is demonstrated by the Master Plan as follows:

- The Master Plan is a direct result of several strategic plans, studies and documents undertaken by the New South Wales (NSW) Government including the Western Sydney Aerotropolis Plan and Western Sydney Aerotropolis Precinct Plan.
    - The objectives of the Master Plan align with the key vision, principles and priorities set out in these strategic documents. This responds to the master planning guidelines which requires all applications to align with the overarching vision and principles for the area.
- The Master Plan has undertaken a comprehensive evaluation of the sites physical and strategic attributes informing the proposed structure plan and development vision. This analysis has informed the structure plan and layout which is responsive to the surrounding context.
- The Master Plan identifies different character areas that are consistent with the current zoning for the site and complement the surrounding area without affecting the unique natural landscape.
    - Majority of developable area in Bradfield City Centre is zoned mixed use. This zoning allows for a wide range of commercial, civic, and residential uses that make up a thriving city centre and fosters opportunities for retail and commercial uses that will create local employment and a broader economic base for the future city centre.
    - The zoning enables residential development as part of a diverse mixed-use areas within proximity to Wianamatta-South Creek and Thompsons Creek.
- The Master Plan adopts a landscape led approach that contributes to the establishment of the blue-green infrastructure framework for the wider Aerotropolis region.
    - The Master Plan preserves, protects, and restores over 30 ha of new green space around Thompsons Creek consistent with the Precinct Plan. This will form part of a new regional parklands that retains and preserves ENZ and ENV, significant revegetation for biodiversity, creek restoration, integrated water management, recreation opportunities and cultural values.
- Connecting with Country principles and ongoing Aboriginal Engagement have informed the Master Plan.

The Master Plan will have positive economic impacts for the following reasons:

- The Master plan is a visionary city that will evolve over time to become a renowned centre of excellence for innovation and city making that defines the Western Parkland City.
    - The site will provide a metropolitan centre that will seamlessly integrate with the Aerotropolis Core Metro Station and Western Sydney International Airport and become a future focus area for business, tourism, and social experiences.
    - The Master Plan Site provides for capacity for approximately between 20,000-24,000 jobs by 2056 in the long-term providing a key anchor centre for the development of Aerotropolis and broader Western Sydney. This will aid in fast tracking economic prosperity across the Western Parkland City and complement the existing neighbouring centres, Greater Penrith, Liverpool, and Campbelltown-Macarthur centre.
    - The Master Plan contributes approximately half of the jobs targeted for the Aerotropolis Core precinct with a focus on knowledge intensive jobs.

- The site will become a metropolitan centre for choice, specialising in advanced manufacturing, high technology industries, services, creative industries and science, technology, engineering, and mathematics (STEM) focused educational facilities, and will facilitate the emerging aerospace and defence industries.

The Master Plan will have positive Social Impacts for the following reasons:

- The Master Plan considers the relationship between infrastructure and population growth. It directly responds to the additional capacity that will be offered through investment in Sydney Metro and includes assessment of the social infrastructure for which demand would be generated by the proposal.
- The Masterplan will drive investment, provide employment and housing opportunities at a range of scales, and create vibrant centres where people work, live, visit, and play.
    - The Bradfield City Centre has the capacity to deliver 10,000 apartments making a significant contribution to total supply and to diversifying housing supply within the Aerotropolis
    - The Master Plan Site provides residential development yields for Bradfield indicating an approximate residential population of 15,000 – 23,000 residents up to and beyond 2056.
    - The Master Plan Site provides job projections of an anticipated total worker population of approximately 24,000 by 2056.
- It is anticipated that the needs of the population will change over time as Bradfield and the broader Aerotropolis is developed, the cumulative impact of this increasing population will be continuously monitored every 5 years through the masterplan review process to enable infrastructure to respond to the changes in demand and be provided.

The Master Plan is within the Public Interest for the following reasons:

- The Master Plan is overall consistent with the relevant planning framework, where non-compliances, variations and amendments have arisen the Master Plan Application and support appendices have provided sufficient justification to warrant approval.
- The Master Plan has demonstrated specific and strategic merit.
- The Master Plan will have a positive economic impact through provision of jobs and contribution to the Aerotropolis and Western Parkland City job and employment targets.
- The Master Plan will have a positive social impact through contribution to residential yields and will support the existing and future population of the Aerotropolis and Western Parkland City.
- The Master Plan is within the public interest.

Appendix A - Master Plan Report

Appendices A – HH are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix B - Urban Design Report

Appendices A – HH are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix C - Response to Country

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix D - Design Excellence Strategy

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix E - Exempt and Complying Development Code

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix F - Smart Cities Implementation Plan and Assessment Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix G - Traffic Management Accessibility Plan Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix H - Utility Infrastructure and Servicing Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix I - Integrated Water Cycle Management Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix J - Aviation Impact Assessment Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix K - Flooding Impact Assessment

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix L - Sustainability Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix M - Biodiversity Strategy and Impact Assessment Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix N - Social Infrastructure Strategy Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix O - Economic Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix P - Air Quality Impact Assessment Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix Q - Noise and Vibration Impact Assessment Report v Appendix

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix R - Pedestrian Wind Environment Review Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix S – Statement of Heritage Impact

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix T – Aboriginal Engagement Outcomes Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix U – Aboriginal Cultural Heritage Assessment Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix V – Infrastructure Delivery Strategy

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix W – Earthworks Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix X – Art and Culture Strategy Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix Y – Bushfire Strategy and Impact Assessment Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix Z – Ground conditions Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix AA – Contamination Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix BB – Housing Strategy Statement Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix CC – Circular Economy (Waste and Services) Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix DD – Consultation Outcomes Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix EE – 24 Hour Economy Strategy Statement Report

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix FF – Survey Plan

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix GG – Explanation of Intended Effect

Appendices A – HH are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix HH –Discussion Paper for proposed Aerotropolis Precinct Plan and DCP amendments

Appendices A – GG are provided within separate documents which have been submitted as part of this Master Plan Application.

Appendix II – Western Sydney Aerotropolis Precinct Plan Compliance Table

15.1 Western Sydney Aerotropolis Precinct Plan

The Western Sydney Aerotropolis Precinct Plan (Aerotropolis Precinct Plan) March 2022 has been prepared and is in force under the provisions of *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*.

A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

Table 17 provides an assessment of the Master Plan in consideration of the Aerotropolis Precinct Plan.

Table 17 - Aerotropolis Precinct Plan objectives

Objective	Objective/Requirement description	Addressed by Master Plan
2.1 Aerotropolis Precinct Plan objectives		
O1	• *'Start with Country' by promoting access to Country and designing the Aerotropolis through a process that includes Aboriginal people.*	• The Western Parkland City Vision has three main components. One is "Connected" – which states the Master Plan Site will be designed to respect and connect with Country and our First Nations people. The Master Plan will celebrate our cultural diversity. The Recognise Country Report at **Appendix C** and the Urban Design Report at **Appendix B** shows how this this concept has been adopted as a key consideration in the preparation of the Master Plan for the Master Plan Site. • The Master Plan has addressed the objective in the Recognise Country Report which has been prepared in consultation with the Aboriginal community to ensure that connecting with Country principles are imbedded in the Master Plan. See the Recognise Country Report at **Appendix C** and the Urban Design Report at **Appendix B**
O2	• *Celebrate culture by reflecting the cultural landscape and continuous connection of Aboriginal people and Country through:* • *the design of the public domain*	• The Master Plan has addressed this objective in the Recognise Country Report at **Appendix C** and the Urban Design Report **Appendix B**.

Objective	Objective/Requirement description	Addressed by Master Plan
	• *preservation and rehabilitation of the natural environment and systems* • *the alignment of movement networks with culturally significant spaces* • *the design of buildings, and* • *keeping language alive in the naming of places.*	
03	• *Integrate development and the delivery of infrastructure to maintain a supply of developable land that maximises the efficiency of infrastructure investment.*	• The infrastructure staging for the Master Plan has been designed to maximise the efficiency of infrastructure investment planning and land use development of Bradfield City Centre. The staging of Infrastructure and land use development have been addressed in the Urban Design Report at **Appendix B** and the Infrastructure Delivery Strategy at **Appendix V**.
04	• *Protect Airport operations, including 24-hour operations, and protect future communities from aircraft noise.*	• The potential impact of the Airport operations on Bradfield City Centre is considered low due to the large separation distance between the Airport and Bradfield City Centre. Potential acoustic and noise impacts of residential receivers is minimal. The Master Plan has addressed the airport's 24-hour operations and the protection of future communities from potential aircraft noise in the Aviation Impact Assessment and the Noise and Vibration Impact Assessment at **Appendix J** and **Appendix R**.
05	• *Facilitate quality and innovative development to provide for a variety of employment uses that grow and diversify the economy of the Western Parkland City.*	• Bradfield City Centre will support a cluster of advanced and innovative industries by creating an urban framework in which they can operate, collaborate and scale-up. The proposed Master Plan will provide employment opportunities and diversify the economy of the Western Parkland City. • The Master plan has further addressed this objective and the desired outcomes of diversification of the Western Parkland Cities economy in the Economic Report in **Appendix O**.
06	• *Enable land use to evolve in line with changing economic drivers and facilitate development that will contribute to building the Western Parkland City.*	• The Master Plan allows for Bradfield City Centre to evolve and develop overtime with suitable development staging which is provided for within the Urban Design Report in **Appendix B**. This allows for the city to evolve over time as the resident and worker population grows across the development horizons. There are long term economic drivers which will support the development of Bradfield City Centre and the building of the Western Parkland City. This is addressed the Economic Report in **Appendix O**.
07	• *Implement a landscape-led approach to designing the Aerotropolis, utilising the blue-green grid and natural topography of the Aerotropolis as the defining elements.*	• The Master Plan has been designed from a landscape led approach including the retention of water elements, preservation, and provision of green within walking distances from the key city blocks, civic spaces, and transport corridors. Refer to the Urban Design Report, **Appendix B**.

Objective	Objective/Requirement description	Addressed by Master Plan
O8	• *Provide for social infrastructure in strategic locations that support the residents, workers, and visitors to the Aerotropolis.*	• The Master Plan includes parklands and open green spaces within 10-minute walking distance of residential and employment areas in accordance with the NSW Premiers Priorities. The Urban Design Report, **Appendix B** outlines the open space and landscaping strategy across Bradfield City Centre. • The Master Plan has been prepared in response to and by considering the recommendations of the Social Infrastructure Strategy Report at **Appendix N**. The study provides a breakdown of relevant facility requirements for the Master Plan Site including health, education, arts, and creativity spaces.
O9	• *Plan for a transport network that facilitates movement of freight and people and prioritises active and sustainable transport modes to improve community health and minimise the impacts of development and economic activity on climate change.*	• The Master Plan provides transport networks that facilitate the movement of people through walking and cycling across Bradfield City Centre, thus providing options for community health and minimisation of climate change impacts through sustainable modes of transport. Refer to the Urban Design Report **Appendix B.** • The Master Plan has been designed by considering the location, alignment and arrangement of the existing major infrastructure corridors and planned transport linkages to ensure the efficiency of the future transport network and freight movement within the Master Plan Site. Refer to the Urban Design Report **Appendix B** and Traffic Management Accessibility Plan Report at **Appendix G**.
O10	• *Provide landscaped, safe, activated, interesting and healthy streets that prioritise pedestrian, cycle, and public transport movements.*	• The Master Plan has been informed by a landscape led approach and has provided a street network which prioritises walking, cycling and public transport within the street network. Refer to the Urban Design Report at **Appendix B** and the Traffic Management Accessibility Plan Report at **Appendix G.**
O11	• *Design an urban environment that responds to the climate extremes of Western Sydney and mitigates and adapts to urban heat.*	• The Master Plan of Bradfield City Centre has been prepared to reduce embodied carbon associated with its construction and ongoing use. The Master Plan seeks to deliver a net-zero outcome certified under the national Climate Active program by 2030. The adoption of a multi-utility approach to the provision of water and energy on Master Plan Site and a circular economy approach for waste and resource management will enable the net-zero outcomes. Refer to the Sustainability Report at **Appendix L**. • The project will embed an integrated water cycle management system and use water as a key design feature that would support biophilic connection, create space for recreation and help mitigate urban heat effects. Refer to the Sustainability Report at **Appendix L** and Integrated Water Cycle Management Report at **Appendix I**.
O12	• *Manage water in the landscape to facilitate urban cooling, improve*	• An integrated water cycle management system has been proposed to ensure the provision of

Objective	Objective/Requirement description	Addressed by Master Plan
	waterway health and biodiversity and promote sustainable water use.	appropriate water supply for landscaped areas. Also, to ensure runoff is harvested and treated using WSUD principles. Non-permeable surfaces will be minimised on Master Plan Site. Refer to the Sustainability Report at **Appendix L** and the Integrated Water Cycle Management Report at **Appendix I.** • The Master Plan has been designed by adopting a landscape led approach that includes the retaining of water elements on Master Plan Site, preserving and providing green spaces within walking distances from the key city blocks, civic spaces, and transport corridors. Refer to the Urban Design Report at **Appendix B.**
O13	• *Plan for a resilient city through implementation of a risk-based approach to management of natural hazards including flooding, bushfire, drought, and heat.*	• The Master Plan has been designed to provide a regenerative outcome for the natural environment. Thus, the existing blue links will be restored new green links will be established, an integrated water cycle management system and a water sensitive urban design approach will be provided on Master Plan Site to mitigate the potential impacts of climate change on Master Plan Site. Refer to the Sustainability Report at **Appendix L**. • The Master Plan has been prepared and designed to manage the impacts of flooding. Refer to the Flooding Impact Assessment report at **Appendix K** and the Integrated Water Cycle Management Report at **Appendix I**. • The Master Plan has been prepared in consideration of potential bushfires and the necessary impact mitigations. The Master Plan has been designed by providing perimeter roads adjacent to all hazard areas, incorporating capability for compliant APZs. Refer to the Bushfire Strategy and Impact Assessment Report at **Appendix Y**. • The Master Plan includes an integrated water cycle management system to ensure all rain and stormwater on Master Plan Site is captured and treated on Master Plan Site. The proposed water cycle management system will enhance downstream water quality and protect environmental flow in both storm and drought events. Refer to the Integrated Water Cycle Management Report at **Appendix I**. • The Master Plan embeds an integrated water cycle management system and use water as a key design feature to support biophilic connection, space for recreation and to help mitigate urban heat effects. Refer to the Integrated Water Cycle Management Report at the Sustainability Report at **Appendix L.**
O15	• *Facilitate the establishment of circular economy industries to reduce waste, leverage synergies between industries and circulate resources within and beyond the industrial*	• The Master Plan provides for the establishment of a circular economy at its core and provides opportunities for the reduction and recycling of waste and materials and delivering a low carbon

Objective	Objective/Requirement description	Addressed by Master Plan
	supply and materials chains of the Aerotropolis.	precinct. Refer to the Sustainability Report at **Appendix L**. • Bradfield City Centre will be designed to reduce embodied carbon associated with its construction. Refer to the Sustainability Report at **Appendix L** and the Circular Economy (Waste and Services) Report at **Appendix CC**.
2.2 Aerotropolis Core		
O1	• *Develop a metropolitan centre, around the Aerotropolis Core Metro station that will be a focus for business, tourism, and social experiences.*	• The Master Plan has been developed around the Aerotropolis Core Metro Station and its pedestrian interface and wayfinding linkages through the city centre. Refer to the Urban Design Report at **Appendix B**. • The Master Plan includes commercial areas, public spaces, and open spaces within a short walking distance of the Aerotropolis Core Metro Station to allow for place activation for business, tourism, and social experiences. Refer to the Urban Design Report at **Appendix B** .
O2	• *Be the location of choice for advanced manufacturing and high technology industries in Australia with accessible infrastructure, public transport and high design quality with fit-for purpose buildings and green spaces.*	• The Master Plan includes initial development activity in Stage 1 which is focused on the delivery of an Advanced Manufacturing Research Precinct that will include the Advanced Manufacturing Research Facility (AMRF). This will enable the earliest economic development activity within Bradfield City Centre and will establish a standard for future stages of development. Refer to the Urban Design Report at **Appendix B** • The Master Plan will allow for desirable and suitable land uses to be provided on Master Plan Site including advanced manufacturing, aerospace, research and development activities, high technology industries, education, and professional services. Refer to the Urban Design Report at **Appendix B**. • The Master Plan has designed for this objective, using the Smart Cities Implementation Plan and Assessment Report, at **Appendix F** and Design Excellence Strategy at **Appendix D** .
O3	• *Facilitate the establishment of an aerospace and defence industries sub-precinct through the provision of appropriate infrastructure, a variety of lot configurations and sizes and by enabling 24/7 operations of the Western Sydney Airport.*	• The proposed Master Plan scheme will allow for desirable and suitable land uses to be provided on Master Plan Site including advanced manufacturing, aerospace, research and development activities, high technology industries, education, and professional services. Refer to the Urban Design Report at **Appendix B** and the Economic Report at **Appendix O.**
O4	• *Facilitate the development of educational uses accessible by public transport and active transport.*	• Central to the success of social infrastructure provision across Bradfield will be the co-location of key education facilities and industry to create an innovation hub. Refer to the Urban Design Report at **Appendix B** and the Social Infrastructure Strategy at **Appendix N**.

Objective	Objective/Requirement description	Addressed by Master Plan
		• The Master Plan has been designed for walking and cycling and educational uses, and key commercial areas are walkable and accessible from public transport connections. Refer to the Urban Design Report at **Appendix B**.
O5	• *Prioritise pedestrian and active transport within the Aerotropolis Core through infrastructure and amenity in the street network and the blue-green grid.*	• The Master Plan has provided a walking and cycling infrastructure network which will cover all roads and streets enabling ease of movement and facilitate pedestrian accessibility and permeability through the Aerotropolis Core in both the street network and the blue-green grid. A hierarchy of safe cycleways will include a Principal Bicycle Network (PBN), a local bicycle network and quiet local streets. PBNs will be bike-only routes connecting major destinations while smaller, local routes will connect priority corridors. Cycle infrastructure will be used to increase the catchment of Metro stations and bus stops, connect businesses and residents with centres and provide a genuine alternative to private vehicle travel. Refer to the Urban Design Report at **Appendix B** and the Traffic Management Accessibility Plan Report **Appendix G**.
O6	• *Enable residential development as part of a diverse mixed use sub-precinct in areas that are not impacted by airport noise and that benefit from proximity to Wianamatta-South Creek and Thompsons Creek.*	• The Master Plan provides for mixed use zones around the Aerotropolis Core Metro station which will enable the delivery of employment and higher density residential uses and the inclusion of a mix of commercial and retail uses like offices, medical centres, social services, and places of entertainment. Refer to the Urban Design Report at **Appendix B**. • The operation of the airport will have minimal impact due to large separation distances between residential receivers. Refer to the Noise and Vibration Impact Assessment at **Appendix Q** and the Aviation Assessment Report at **Appendix J**.
3.1 Infrastructure Delivery		
I1	• *Prior to granting development consent, the consent authority must be satisfied that essential services and infrastructure are available or will be available when required for the development. Essential services and infrastructure are road access, water supply, sewer, electricity, and stormwater infrastructure.*	• Provision of these services are generally subject to the relevant Development Application stage for detailed development/design considerations and subsequent assessment and development consent. However, the Master Plan has included major infrastructure staging including road access and Aerotropolis Core Metro Station interface. Refer to the Urban Design Report at **Appendix B**. • The Master Plan has considered the provision of future infrastructure including utilities. Refer to the Utility Infrastructure and Servicing Strategy at **Appendix H** and Infrastructure Delivery Strategy at **Appendix V**. • The Master Plan has considered the provision of water supply, sewer, and stormwater infrastructure on Master Plan Site. Refer to the Civil and Water Cycle Management Report at **Appendix I.**

Objective	Objective/Requirement description	Addressed by Master Plan
I2	• *Development near utility infrastructure should be in accordance with the relevant service authority's guidelines and requirements.*	• Future development applications will consider the relevant service guidelines and requirements where development is proposed near utility infrastructure. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
I3	• *Development will need to investigate and consider future planned utility infrastructure including the aviation fuel pipeline.*	• Future development will investigate and consider any utility infrastructure including the aviation fuel pipeline. Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
I6	• *Fast, reliable, and high-speed internet connectivity infrastructure is to be provided as part of all subdivision development and all buildings are to have direct connection to high-speed broadband that complies with the standards listed in the Australian and New Zealand Smart Cities Council Code for Smart Communities.*	• The Master Plan includes digital accessibility as part of the technical framework to provide internet connections across the Master Plan Site. Refer to the Smart Cities Implementation Plan and Assessment Report at **Appendix F**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
3.2 Development Sequencing		
DS1	• *The sequencing of development is to be generally in accordance with the Sequencing Plan (Out of Sequence provisions are outlined in Section 3.3).*	• Bradfield City Centre is identified as a First Priority area in the Sequencing Plan. Thus, the Master Plan is in response to this sequencing plan.
DS2	• *Development is not to compromise the efficient and orderly provision and staging of the transport network, utilities, and servicing.*	• The Master Plan has been prepared and is in accordance with the Sequencing Plan and will not adversely impact the orderly provision and staging of the future transport network. Refer to the Urban Design Report at **Appendix B**
DS3	• *Early development must prioritise locations well supported by high levels of public and active transport accessibility.*	• The Stage 1 of the Master Plan comprises approximately 20 ha of land located within the central and north-west quadrant of land surrounding the future Sydney Metro Station. Stage 1 includes significant transport infrastructure including the Metro station, transit boulevard, rapid bus station, bus layover and charging facility, temporary commuter carpark and the key road network that frames the city blocks including access from Badgerys Creek Road. Refer to the Urban Design Report at **Appendix B**.
DS4	• *Development does not result in isolated areas requiring out of sequence servicing by transport networks, utilities, and services, or at additional cost to government or utility agencies.*	• The Master Plan is in accordance with sequencing and utilities requirements. Relevant government agencies will be consulted during the finalisation of the Master Plan to ensure consistent infrastructure planning and delivery for the Master Plan Site. Refer to the Urban Design Report at **Appendix B,** Utilities

Objective	Objective/Requirement description	Addressed by Master Plan
		Infrastructure and Servicing Report at **Appendix H** and Infrastructure Delivery Strategy at **Appendix V**.
DS5	• *The road network proposed as part of development applications is to be consistent with the Street Hierarchy Map, or temporary arrangements must be made with agreement of the relevant Roads Authority.*	• The Master Plan is generally consistent with the street network and hierarchy proposed in the Aerotropolis Precinct Plan. However, several street sections have been further refined and additional street types provided to offer greater diversity and achieve the vision for a pedestrian-focussed, safe, and sustainable movement network. Refer to the Urban Design Report at **Appendix B**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
DS6	• *Locations with good access to the Western Sydney Airport for freight and passengers are to be prioritised.*	• Bradfield City Centre is identified as a First Priority area in the Sequencing Plan due to its location and having good access to the Metro Station and the Western Sydney Airport.
4.1 Proposed Land Use and Structure Plan		
LU1	• *The types and densities of land uses are to be consistent with the Land Use Plan. Key land use terms used in the Land Use Plan are described in the Glossary.*	• The Master Plan includes types and densities of land uses which are generally consistent with the Land Use Plan. Refer to the Urban Design Report at **Appendix B**.
LU2	• *Subdivision and civil works are to be consistent with the road network shown on the Transport Network Plan. Local streets, laneways and active transport routes are designed to integrate with the Transport Network Plan and to:* • *Ensure connectivity* • *Encourage sustainable transport choices by providing direct routes that prioritise active transport and public transport for workers* • *Appropriately cater for heavy vehicles including freight movements and public transport vehicles* • *Facilitate coordinated development of parcels in different ownerships or at different times* • *Assist with managing water in the landscape* • *Minimise the extent and depth of earthworks and the need for retaining walls.*	• The Master Plan has respected this guidance and seeks to integrate the proposed scheme for the Master Plan Site with the larger Aerotropolis Precinct Plan network, while it proposes minor refinements and enhancements to the street network and sections within the Master Plan Site. The proposed subdivision pattern is in accordance with the proposed road network. The transport network plan provides for connectivity, sustainable transport, and heavy vehicle movements. The Master Plan provides for the development of land use parcels and the management of water through the landscape. Refer to the Urban Design Report at **Appendix B**. • The explicit minimisation of earthworks and the need for retaining walls will be addressed at the relevant development application stage, refer to the Earthworks Report at **Appendix W**.
LU3	• *Local or Neighbourhood Centres in the Enterprise Zone or Agribusiness Zone are to be located within 400m of the indicative location on the Land*	• The Master Plan is consistent with this locational arrangement. Refer to the Urban Design Report at **Appendix B**.

Objective	Objective/Requirement description	Addressed by Master Plan
	Use Plan, and on public transport routes (collector roads or Sub-arterial Roads)	
LU4	• *Connect ridgelines to watercourses through linear streets that maintain and enhance visual connections, integrate canopy cover, deep soil, landscaping, and water management.*	• The Master Plan provides for linear connections north/south from Central Park to Thompsons creek within the City Walk West precinct. Refer to the Urban Design Report at **Appendix B**.
LU5	• *Ensure built form is appropriate for its use and ensure natural cross ventilation, improved internal thermal comfort and reduced reliance on air conditioning.*	• These detailed considerations will be addressed at the relevant Development Application Stage.
LU6	• *Provide for high quality architectural and design outcomes which respond to topography and Master Plan Site characteristics.*	• The Master Plan establishes a design framework that considers view corridors, water movement and accessibility in respond to the natural topography. The desired built form has been tested concurrently against the existing topography and the potential future context surrounding the Master Plan Site. The topography and Master Plan Site boundaries provide the starting point for development of the preliminary Master Plan Site envelope. Refer to the Urban Design Report at **Appendix B**. • The Master Plan will provide for high quality design outcomes through design excellence. Refer to the Design Excellence Strategy at **Appendix D**.
LU7	• *Residential development in the Mixed-Use Zone is to be located:* • *Within 1 kilometre walking distance of Metro stations; or* • *Within 400 metres of a bus stop or a Collector Street; and* • *Within 200 metres of open space.*	• The Master Plan provides mixed use zones allows for residential development around the Aerotropolis Core Metro Station. Residential development will be provided within short walking distances of bus stops, collector roads and open space. Refer to the Urban Design Report at **Appendix B.**
4.2 Subdivision and Block Structure		
SU1	• *Block structure is designed to enable the delivery of efficient and accessible public transport routes.*	• The Master Plan provides a block structure and a street layout in line with this requirement for efficient and accessible public transport routes. Refer to the Urban Design Report at **Appendix B** and the Traffic Management Accessibility Plan Report in **Appendix G**.
SU2	• *Block structures and the road network are designed to respond to the natural topography and the flow of water in the landscape, including measures to appropriately manage overland flow and localised flooding of properties.*	• The Master Plan provides for block structures and a road network that have been designed to respond to the natural topography of the Master Plan Site and the existing flow of water across the landscape. The Master Plan further provides for flood mitigation across the Master Plan Site. Refer to the Urban Design Report at **Appendix B**, Integrated Water Cycle Management Report at **Appendix H** and Flooding Impact Assessment at **Appendix K**.
4.3 Aboriginal Culture and Heritage – Recognising Country		
RC1	• *Development applications are to retain access to and connect*	• Refer to the Aboriginal Cultural Heritage Assessment Report at **Appendix U**.

Objective	Objective/Requirement description	Addressed by Master Plan
	significant Aboriginal heritage and areas of cultural value, conservation corridors and other identified areas of significant Aboriginal heritage.	• Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
RC2	• *Development applications that propose disturbance to the landscape in areas of moderate, high, or very high Aboriginal sensitivity or include known Aboriginal cultural or archaeological Master Plan Sites, are required to include an assessment of impacts on archaeological and or cultural heritage values and significance. Where specific measures are required to mitigate or avoid impacts, applications are to include a cultural heritage management plan or conservation management plan prior to the issue of a construction certificate*	• Refer to the Aboriginal Cultural Heritage Assessment Report at **Appendix U**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
RC3	• *Modified trees (carved or scarred) and grinding grooves are to be protected and preserved in situ, and management plans are to be prepared to demonstrate how these items are to be retained and protected.*	• Refer to the Aboriginal Cultural Heritage Assessment Report at **Appendix U**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
RC4	• *Interpretation and story-telling required to inform impact assessments, mitigation measures and management plans are to be undertaken in consultation with, and walking on Country with, the traditional custodians and Local Aboriginal Land Councils (LALCs).*	• The Master Plan provides for interpretation and storytelling to inform impact assessment. Consultation has been undertaken regarding Connecting with Country and with Local Aboriginal Land Councils. Refer to the Aboriginal Cultural Heritage Assessment Report at **Appendix U** and the Aboriginal Engagement Outcomes Report at **Appendix T.**
4.4 Non-Aboriginal and European Heritage		
NA1	• *Existing heritage items and their significant elements are to be retained and managed, including implementation of adaptive re-use and land uses which ensure the long-term conservation viability of heritage items.*	• The Master Plan Site contains no significant heritage items. The Master Plan has been designed to ensure that surrounding heritage items are not adversely impacted on by the proposed development on Master Plan Site. Refer to the Urban Design Report at **Appendix B** and the Statement of Heritage Impact at **Appendix S**.
NA2	• *Position new development, including the design of subdivision and buildings, to maintain visual links, context and significance of the heritage item and its setting.*	• The Master Plan Site contains no significant heritage items. The Master Plan has been designed to ensure that surrounding heritage items are not adversely impacted, and visual links have been provided. Refer to the Urban Design Report at **Appendix B** and the Statement of Heritage Impact at **Appendix S**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design

Objective	Objective/Requirement description	Addressed by Master Plan
		consideration and subsequent assessment and development consent.
NA3	• *Investigate the significance of potential heritage items identified. Where investigations identify heritage values, a heritage management plan is to be prepared outlining the required measures to conserve these values.*	• As above
4.5 Blue-Green Infrastructure Framework		
BG1	• *Development is to contribute to the establishment of the blue-green infrastructure framework for the Aerotropolis in accordance with Figure 5.*	▪ The Master Plan provides for future development to contribute to and enhance the Blue Green Infrastructure Framework. Refer to the Urban Design Report at **Appendix B**.
4.5.2 Riparian corridors		
BG1	• *Waterways and riparian corridors of Strahler Order 2 and higher are to be retained and rehabilitated to a natural state (unless minor realignment can be justified), in accordance with the requirements of the Guidelines for Riparian Corridors on Waterfront Land published by the Department of Primary Industries (Office of Water), or other relevant guidelines adopted and in operation at the time.*	• The Master Plan seeks to reattain and enhance Riparian Corridors. Refer to the Urban Design Report at **Appendix B** and the Biodiversity Strategy and Impact Assessment at **Appendix M**. • Future Development Applications will address these requirements in detail including the Guidelines for Riparian Corridors on Waterfront Land published by the Department of Primary Industries (Office of Water) and other guidelines as relevant. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
BG2	• *Riparian Streets are to be adjacent to riparian corridors. The design of Riparian Streets is to be integrated with the retention or naturalisation of the adjacent watercourse and associated riparian zone in accordance with the requirements of the Guidelines for Riparian Corridors on Waterfront Land published by the Department of Primary Industries (Office of Water), or other relevant guidelines adopted and in operation at the time*	• No riparian streets are identified within the Aerotropolis Precinct Plan within the Master Plan Site.
BG3	• *Consistency with DCP indicative cross-sections to guide the design of Riparian Streets and associated riparian zones.*	• No riparian streets are identified within the Aerotropolis Precinct Plan within the Master Plan Site.
BG4	• *The outer 50% of the Riparian Zone, as defined by the Guidelines for Riparian Corridors on Waterfront Land may contain paths, passive recreation facilities and other amenities subject to the appropriate consideration of flood impacts and safety.*	• The Master Plan provides for recreational facilities in the riparian corridor. Refer to the Urban Design Report at **Appendix B**. • The Master Plan has provided for Flooding Mitigation refer to the Flooding Impact Assessment at **Appendix K**.

Objective	Objective/Requirement description	Addressed by Master Plan
BG5	• *Where a development application proposes the creation of a Riparian Street in association with a riparian corridor in accordance with Requirement BG2, and one or more lots for development, the area of land that comprises the riparian corridor is taken to be part of the minimum pervious area to be provided as part of the development under the DCP.*	• Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
4.5.3 Public domain and canopy cover		
BG1	• *Open space is to be provided to cater for local, district and regional requirements as shown in the Open Space Network.*	• The Master Plan provides for an Open space network that caters for the anticipated requirements in the Aerotropolis Precinct Plan. Refer to the Urban Design Report at **Appendix B**.
BG2	• *Where development generates demand for open space because of resident or worker population densities exceeding those for land uses as specified in the WSAP, the development application is to include or be accompanied by proposed measures to meet that additional demand through:* • *a) Delivery of additional open space as part of the development; and/or* • *b) Establishment of appropriate arrangements for payment of monetary contributions to the relevant authority for the provision of open space in another suitable location.*	• The proposed master plan has been prepared in accordance with population and employment density generations estimated in the relevant planning documents for the Aerotropolis. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
BG3	• *Tree canopy is to be provided on Sub-arterial Roads and Collector Streets shown to achieve a minimum of 40% tree canopy cover at maturity, measured as a percentage of the area of the road reserve.*	• The Master Plan has been designed and seeks to achieve the 40% targets for tree canopy cover and permeable surfaces. This ensures that Bradfield City Centre will be a cool, green, and resilient city. Refer to the Urban Design Report at **Appendix B.** • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
BG4	• *Park Edge Streets are to be provided generally in accordance with the locations shown, and development is to be oriented towards the street and provide for surveillance of the public domain*	• The Master Plan allows for Park Edge Streets to be provided generally in accordance with the locations shown in the Aerotropolis Precinct Plan. Refer to the Urban Design Report at **Appendix B.** • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
4.5.4 Biodiversity and vegetation corridors		
BG1	• *Existing Native Vegetation and other vegetation under the Cumberland*	• Further assessment against this requirement will be required at the relevant Development Application

Objective	Objective/Requirement description	Addressed by Master Plan
	Plain Conservation Plan is to be protected as required by the Aerotropolis SEPP. Development applications are to demonstrate, to the satisfaction of the consent authority, that measures are in place to protect and provide for the long-term management of the vegetation to achieve biodiversity conservation outcomes under the Growth Centres Biodiversity Certification Order or the Cumberland Plain Conservation Plan as relevant.	stage for detailed development/design consideration and subsequent assessment and development consent.
BG2	• *Recreation facilities, pathways and other infrastructure are not to be located on land referred to in Requirement BG1.*	• Further assessment against this requirement will be required at the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
BG3	• *Revegetation and landscaping are designed and managed to account for future climatic conditions and include climate ready species. Resources relating to climate-ready species are available at: https://climatechange.environment.nsw.gov.au/Adapting-toclimatechange/Biodiversity-Adaptation/Managing-changinglandscapes.*	• The Master Plan has provided for climate change mitigation and revegetation and landscaping practices and planting species that will be compliant with climate change. Refer to the Urban Design Report at **Appendix B** and the Sustainability Report at **Appendix L**.
4.5.5 Scenic and cultural connection		
SC1	• *Subdivision design is to orient streets to align with ridgelines*	• The Master Plan has provided a street layout and subdivision patterns which have sought to orient streets to align with ridgelines. Refer to the Urban Design Report at **Appendix B**.
SC2	• *Any required-on Master Plan Site provision of open space is to incorporate high points and retain existing trees.*	• Ridge Park is located at the high point of the site where existing trees will be retained.
SC3	• *Creek to creek and creek to ridgeline landscape connections are established through the design of public domain elements including streets and open space. Landscape connections on Sub arterial Roads and Collector Streets shown are to be continuously accessible by the public and active transport is prioritised on these connections*	• The Master Plan has provided for creek to creek and creek to ridgeline connections through the design of the public domain elements. Refer to the Urban Design Report at **Appendix B**.
SC4	• *Streets are to be designed to follow natural drainage lines and overland flow paths to minimise the need for drainage easements or reserves through private land.*	• The Master Plan provides a street layout that follows the natural drainage lines to minimise the need for drainage easements or reserves throughout the Master Plan Site. Refer to the Integrated Water Cycle Management Report at **Appendix I.**
4.6 Movement Framework		

Objective	Objective/Requirement description	Addressed by Master Plan
MF1	• *The Transport Network is to be designed generally in accordance with the Aerotropolis Precinct Plan.*	• The Master Plan provides a Transport Network which is consistent with the model contained in the Aerotropolis Precinct Plan. Refer to the Urban Design Report at **Appendix B**.
MF2	• *The Transport Network is designed to accommodate bus corridors and the Indicative Local Bus Network generally as shown on, so that:* *a) 90% of businesses are within a 400 metre walk of a street that can carry public transport in the Enterprise Zone and Agribusiness Zone.* *b) All businesses and residents in the Mixed-Use Zone are within a 400 metre walk of a street that can carry public transport or a Metro station.*	• The Master Plan provides for a Transport Network Plan which accommodate bus corridors and a local bus network connecting to the Metro. This will ensure that future businesses and residents will be within 400m of public transport. Refer to the Urban Design Report at **Appendix B**.
MF3	• *Active transport is integrated with the Blue Green Infrastructure Framework and provided generally in accordance with the Active Transport Network.*	• The Master Plan provides for an Active Transport Network for walking and cycling which is integrated with the Green Infrastructure Framework and is generally in accordance with the Active Transport Network in the Aerotropolis Precinct Plan. Refer to the Urban Design Report at **Appendix B**.
4.6.2 Street hierarchy and typology		
SH1	• *The Road Network within the Transport Network is to be generally consistent with the alignment and connections of roads shown in Figures 8-10* *Major roads (Sub-arterial and Arterial and Rapid Bus Routes) are to be designed to:* *a)Respond to topography;* *b)Enable the efficient movement of water, replicating natural flow patterns as closely as possible;* *c)Intersect with arterial or classified roads at locations and using intersection treatments nominated or agreed by the road authority;* *d)Accommodate buses generally consistent with the alignments and connections shown in Figure 8;* *e)Accommodate separated cycleways generally consistent with the alignment and connections of cycleways shown in Figure 9; and* *f)Connect with centres and metro stations.*	• The Master Plan provides a Road Network which is generally consistent and aligns with the Aerotropolis Precinct Plan. Refer to the Urban Design Report at **Appendix B**. • Detailed design considerations will be required at the relevant Development Application stage.
SH2	• *Local and Collector streets are to be designed to:* *a)Connect to other streets in the hierarchy in a logical sequence, so*	• The Master Plan and the overall street network have been designed in accordance with the Aerotropolis Precinct Plan for local and collector streets. Refer to the Urban Design Report at **Appendix B**.

Objective	Objective/Requirement description	Addressed by Master Plan
	that Local Streets connect to other Local Streets or to Collector Streets; *b)Incorporate priority-controlled intersection treatments;* *c)Minimise 4-way intersections and avoid intersections with more than 4 streets; d)Provide interfaces between urban land and land identified for open space, conservation, or stormwater management; e)Enable land in different ownerships to be developed independently and ensure that legal and physical access to properties is maintained at all stages in the development process;* *f)Convey stormwater within the Total Water Cycle Management network as shown on Figure 6;* *g)Contribute to tree canopy and the Blue Green Infrastructure Framework shown on Figure 5; and h)Maximise opportunities for the energy efficient design of buildings.*	• Detailed considerations will be required at the relevant Development Application stage.
SH3	• *Where a development application proposes a variation to the Local Street or Collector Street , the applicant must demonstrate that in addition to the requirements in SH2, that the variation: a)Achieves a permeable street network; b)Encourages walking and cycling and minimises travel distances; c)Maximises connectivity to community facilities, open space and centres; d)Takes into account topography and the flow of water in the landscape; e)Will not detrimentally impact on access to adjoining properties or result in isolation of properties; and f)Will not impede the orderly development of adjoining properties.*	• The Master Plan and the overall street network have been designed in accordance with the Aerotropolis Precinct Plan for local and collector streets. Refer to the Urban Design Report at **Appendix B**.
SH4	• *Roads and streets are to be designed in accordance with the Western Sydney Street Design Guidelines, except where specific street cross sections are provided in the DCP for streets as shown on the street hierarchy map at Figure 10.*	• The Western Sydney Street Design Guideline has been used as a reference in the design of Bradfield City Centre roads.
SH5	• *Roads and streets are aligned to follow property boundaries where possible to reduce lot severance.*	• Boundary roads are generally consistent with the Precinct Plan.
4.6.3 Development adjacent to protected transport corridors		

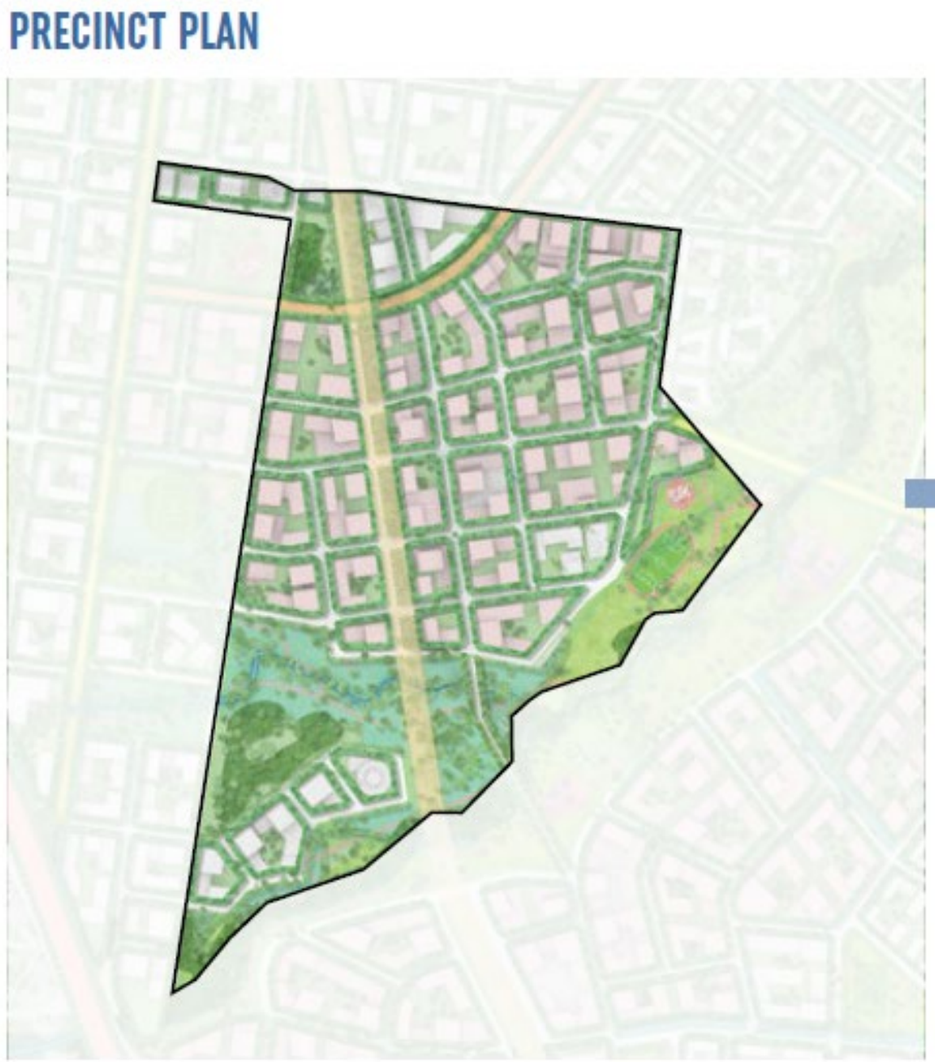
Objective	Objective/Requirement description	Addressed by Master Plan
PC1	• *Development adjacent to corridors identified on the Transport and Infrastructure SEPP and the Aerotropolis SEPP is to be designed to orient noise sensitive elements (for example habitable rooms) away from the noise source.*	• A detailed consideration/assessment of the Transport and Infrastructure SEPP and the Aerotropolis SEPP is provided in **Section 4**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
4.7 Sustainability and Resilience		
SR1	• *Energy, water, and waste systems are to use a circular economy approach to improve efficiency and result in low-carbon developments.*	• The Master Plan has included a circular economy approach for energy, water, and waste systems to result in a low carbon precinct. Refer to the Sustainability Report at **Appendix L** and Circular Economy (Waste and Services) Report at **Appendix CC**.
SR2	• *Effectively use renewable energy supply including solar, wind, green hydrogen, and bio-energy.*	• The Master Plan has included a circular economy approach for the use of renewable and green energy to result in a low carbon precinct. Refer to the Sustainability Report at **Appendix L** and Circular Economy (Waste and Services) Report at **Appendix CC**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
SR6	• *Incorporate accessible Circular Economy Infrastructure into mixed use developments to ensure adequate opportunity for people to participate in reuse and recycling schemes.*	• The Master Plan has included a circular economy approach for the principles for future development to allow for participation. Refer to the Sustainability Report at **Appendix L** and Circular Economy (Waste and Services) Report at **Appendix CC**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
5.1 Hierarchy of Centres		
LU1	• *Where a centre is proposed in an alternative location the development application is to demonstrate that the location achieves the role, intent, uses, transport connectivity and locational criteria.*	• Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
LU2	• *Local and Neighbourhood Centres are to be located on or adjacent to bus routes.*	• The Master Plan has considered transport routes when locating its centres hierarchy. Refer to the Urban Design Report at **Appendix B** and the Traffic Management Accessibility Plan Report at **Appendix G**.
LU3	• *Local and Neighbourhood Centres are not to be located on arterial roads.*	• The Master Plan has considered transport routes when locating its centres hierarchy. Refer to the Urban Design Report at **Appendix B** and the Traffic Management Accessibility Plan Report at **Appendix G**.

Objective	Objective/Requirement description	Addressed by Master Plan
LU4	• *Retail and social infrastructure in the Agribusiness and Enterprise Zones is to be concentrated in the Local and Neighbourhood Centres.*	• The Master Plan has considered the provision of retail and social infrastructure land uses within the Enterprise Zone. Refer to the Urban Design Report at **Appendix B**. • Specific land use placements throughout the Master Plan Site will be defined at a later stage. Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
LU5	• *Bulky goods and specialised retail that requires larger floor plates are to be located outside of the identified centres.*	• land use placements throughout the Master Plan Site will be defined at a later stage. Further assessment against this requirement is subject to the relevant Development Application stage for detailed development consideration and subsequent assessment and development consent.
5.2 Height		
H1	• *The height of buildings is not to exceed the maximum for the land.*	• The Master Plan provides for heights in accordance with the maximum HOB and Obstacle Limitation Surface Map stipulated under the Western Parkland City SEPP and Aerotropolis Precinct Plan. Refer to the Urban Design Report at **Appendix B**. • In case of any modifications to the maximum height of Building requirements under the Aerotropolis Precinct Plan, further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
H2	• *In the Mixed-Use Zone, ensure development does not adversely impact on the amenity of the public domain and adjacent residential areas and that Master Plan Site topography, views and landscape character have been considered.*	• Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent. • Appropriate controls in place regarding solar access.
5.3 Floor Space Ratio		
FS1	• *Buildings are not to exceed the maximum FSR shown on the Floor Space Ratio Map.*	• The Master Plan has translated the floor space ratio into gross floor areas across the developable area, it complies with the maximum FSR. Refer to the Urban Design Report at **Appendix B**.
5.4 Yield and Density		
YD1	• *Residential development is to be primarily located in those parts of the Mixed-Use Zone identified on the Land Use Plan as Mixed Use Residential.*	• The Master Plan will provide for residential development within the Mixed-Use Zone on the Lands use plan. Refer to the Urban Design Report at **Appendix B**.
YD2	• *Development applications in the Mixed-Use Zone are to demonstrate*	• Future Development Applications will be required to demonstrate how they will contribute to employment densities.

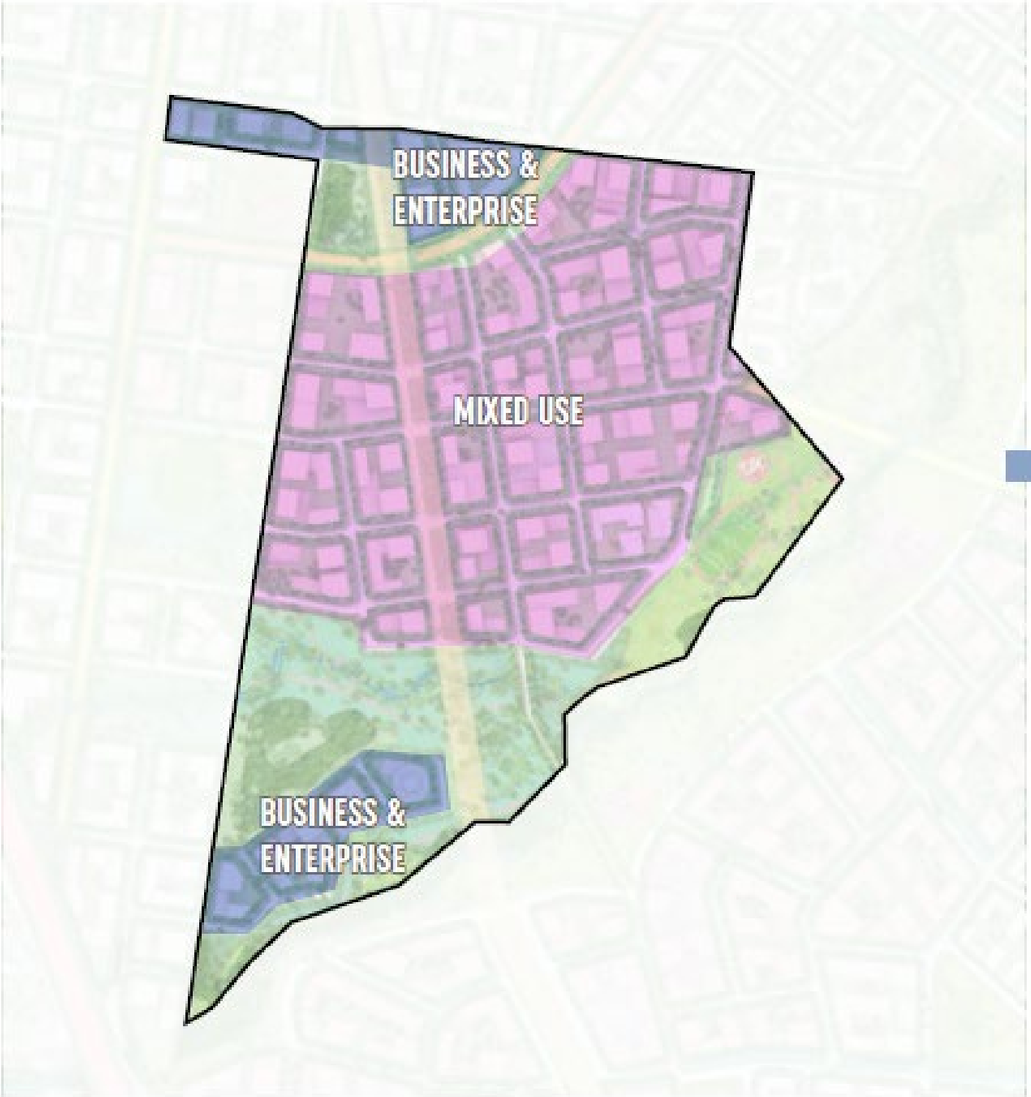
Objective	Objective/Requirement description	Addressed by Master Plan
	how they will contribute to achieving the employment densities in YDO3.	
5.5 Temporary land uses		
LU1	• *Development that is inconsistent with this Aerotropolis Precinct Plan is permitted where required to enable temporary or short term uses on land, where it can be demonstrated that the intended use under the Aerotropolis Precinct Plan can be achieved in the future.*	• Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
5.6 Design Excellence		
Aerotropolis SEPP provides for the relevant considerations for design excellence.		• Refer to the Design Excellence Strategy at **Appendix D**.

Table 18 below provides a representation of Bradfield City Centres Master Plans alignment with the Western Sydney Aerotropolis Precinct Plan.

Table 18 – Bradfield City Centre Master Plan alignment with Aerotropolis Precinct Plan

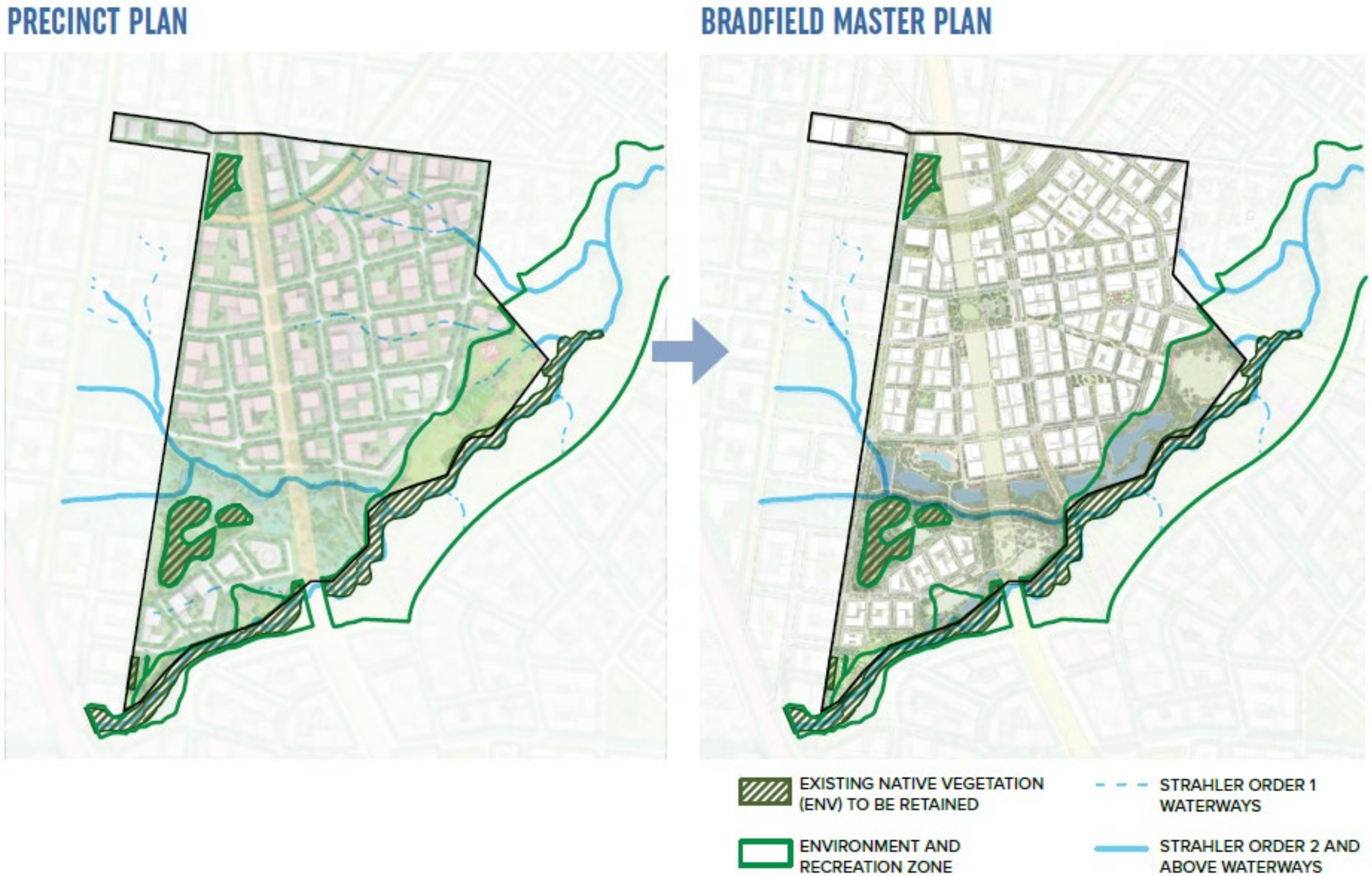
Map Name	*Aerotropolis Precinct Plan*	*Bradfield City Centre Master Plan*
Overall Aerotropolis Precinct Plan		

PRECINCT PLAN



BRADFIELD MASTER PLAN

Green and Blue Grid



PRECINCT PLAN

BRADFIELD MASTER PLAN

PRECINCT PLAN

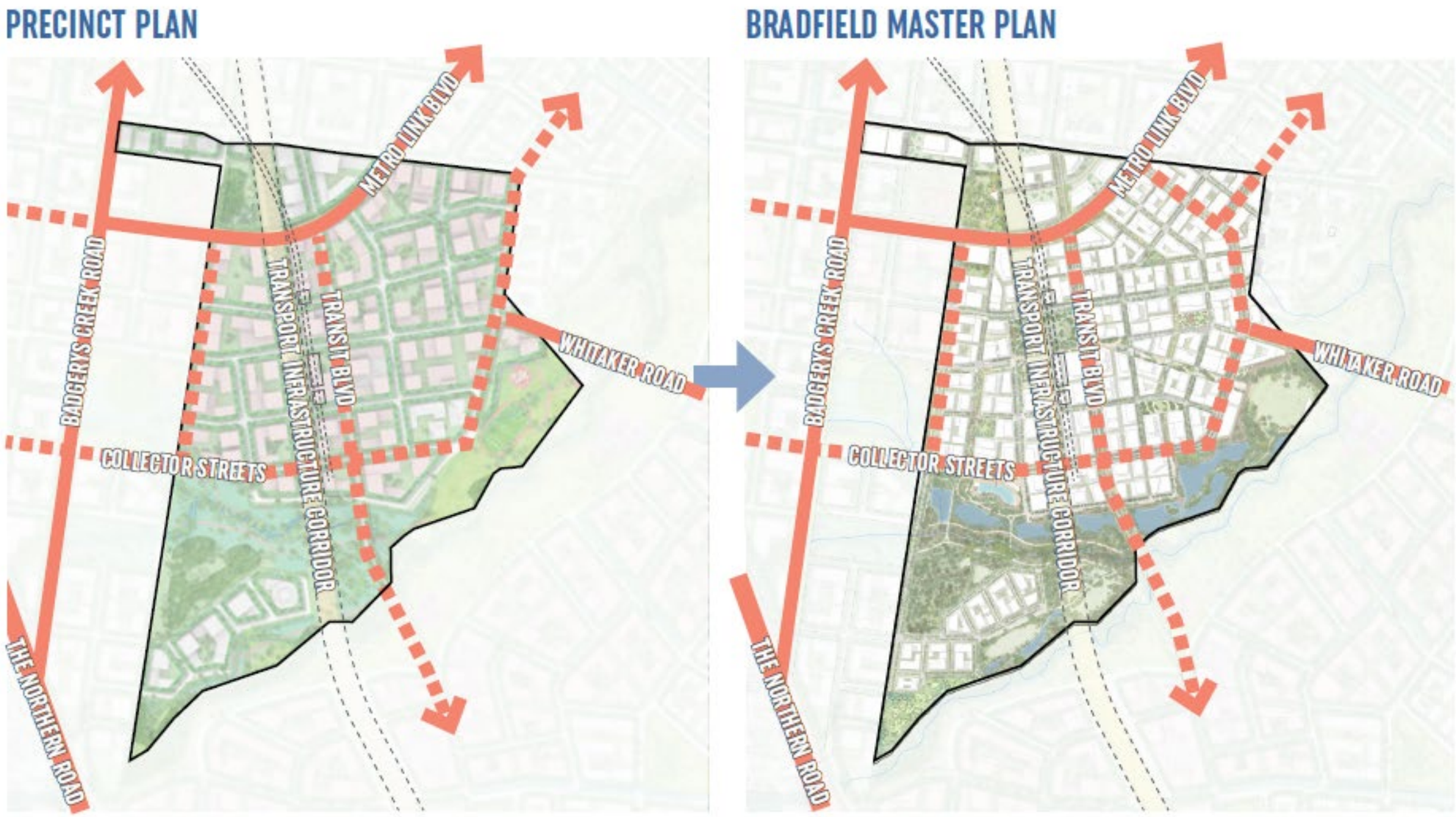
BRADFIELD MASTER PLAN

Connecting Major Destinations

PRECINCT PLAN

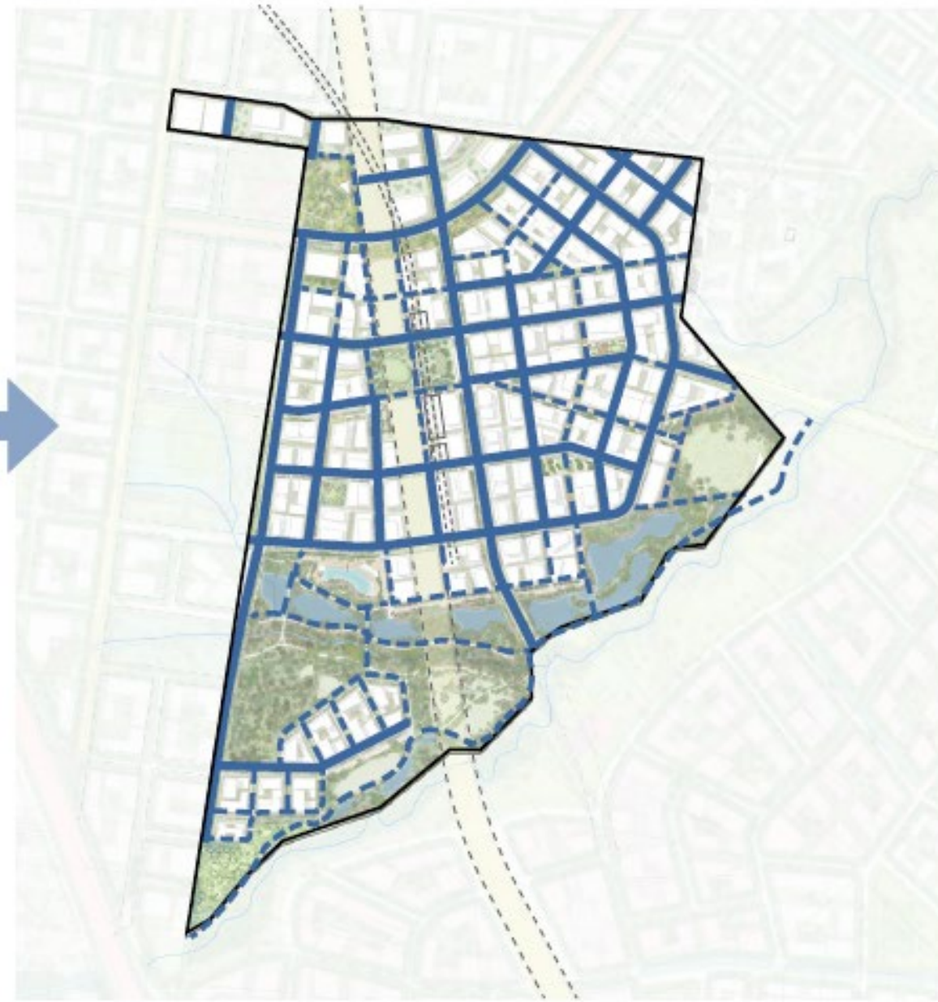
BRADFIELD MASTER PLAN

A Legible Transport Network



PRECINCT PLAN

BRADFIELD MASTER PLAN



GENERAL TRAFFIC STREETS

SHARED ZONES AND PEDESTRIAN ONLY

Distinct Micro Neighbourhoods

PRECINCT PLAN

BRADFIELD MASTER PLAN

Views From Ridge to Creek

PRECINCT PLAN

BRADFIELD MASTER PLAN

Appendix JJ – Western Sydney Aerotropolis Development Control Plan Phase 2 Compliance Table

15.2 Western Sydney Aerotropolis Development Control Plan Phase 2

The Western Sydney Aerotropolis Development Control Plan Phase 2 (Phase 2 DCP) complement the Western Sydney Aerotropolis Plan requirements, and the controls under the Western Parkland City SEPP and the Aerotropolis Precinct Plan that inform the assessment of master plans and development applications in Aerotropolis precincts.

Considering the large volume of requirements contained in the Phase 2 DCP, only the relevant guidelines concerning the proposed Master Plan for Bradfield City Centre are provided within **Table 19**. The technical assessments which have been prepared and included as appendices provided an assessment against the relevant Phase DCP Controls.

The Master Plan includes additional DCP controls and benchmark solutions which are proposed to the Phase 2 DCP. A detailed request to amend the Western Parkland City SEPP, Aerotropolis Precinct Plan and Phase 2 DCP is provided within the Explanation of Intended Effect at **Appendix GG** and Discussion Paper at **Appendix HH**.

Table 19 – Western Sydney Aerotropolis Phase 2 DCP

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
Connecting to culture and Country through Subdivision and Civil Works The Master Plan includes additional DCP provisions.			
PO1	*The cultural values and heritage, waterways and landscapes of Country form a key structuring element of development.* *Development retains and connects and provides access to landscape elements including ridgelines, waterways, and native vegetation.*	1. *For development where the Recognise Country Guidelines apply and in conjunction with Aboriginal heritage assessment requirements, cultural values research is to be undertaken by a qualified Aboriginal heritage consultant (with experience in Aboriginal heritage and cultural values research). Cultural values research must be undertaken in consultation with Traditional Custodians*	• The Master Plan has been designed from a cultural and landscape led approach including the retaining water elements and landscape as a key element of the Master Plan Structure. The Master Plan includes Connecting with Country Principles. Refer to the Response To Country Report at **Appendix C** and the Urban Design Report at **Appendix B**. • The Master Plan has been informed by the identification and assessment of any Aboriginal objects or places within the Master Plan Site. Refer to the Aboriginal Cultural Heritage Assessment Report prepared by Extent Heritage at **Appendix U**. • The Master Plan has been prepared in consultation with Aboriginal Stakeholders, refer to the Aboriginal Engagement Outcomes Report at **Appendix T**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
PO2	*Parks and public open space provide spaces for outdoor cultural practice, learning and play to support connection to culture and Country.*	*The design of the public domain within areas of moderate to high Aboriginal heritage sensitivity identified in the Aerotropolis Precinct Plan is to incorporate spaces for outdoor cultural practice and for learning and cultural play, in accordance with outcomes of cultural values research and engagement with Traditional Custodians and other relevant Aboriginal Stakeholders (Knowledge Holders, LALCs and the local Aboriginal and Torres Strait Islander community).*	• The Master Plan has been prepared in consultation with Aboriginal Stakeholders, refer to the Aboriginal Engagement Outcomes Report at **Appendix T**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
PO3	*Development is guided and informed by Aboriginal people and their cultural knowledge and practice of caring for Country.*	1. *Where relevant, development is designed to enable Aboriginal people to continue to care for Country through the integration of traditional knowledge into environmental assessments and management plans (e.g., floodplain management and bushfire hazard management).*	• Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
Connecting to culture and Country through the Built Form			

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
PO4	*Aboriginal culture is celebrated and embedded within building design.*	1. *For development where the Guidelines apply or that is located within or intersects areas identified as having moderate to high Aboriginal heritage sensitivity in the Aerotropolis Precinct Plan, culturally sensitive design must be incorporated.* 2. *Development proposals must outline how cultural values research and engagement with Traditional Custodians (and Knowledge Holders where appropriate) have informed the design outcomes. Where previous cultural values research (including overarching master plans and neighbouring Master Plan Sites) has been undertaken, the development proposal is to respond to the findings.*	• The Master Plan has been prepared in consultation with Aboriginal Stakeholders, refer to the Aboriginal Engagement Outcomes Report at **Appendix T**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
PO5	*Development enables appropriate provision of built cultural infrastructure including dedicated spaces for cultural practice, places for sharing culture and specialised infrastructure to meet the needs of the local Aboriginal community*	*1. Master Plans and Master Plan Sites of 20 hectares or more, within metropolitan, specialised, and local centres (see Centres Hierarchy map in the Precinct Plan), should identify appropriate Master Plan Sites (location and size) for the provision of cultural infrastructure based on identified need (see Section 4.3 Aboriginal Culture and Heritage – Recognising Country in the Aerotropolis Precinct Plan). This includes specialised stand-alone infrastructure such as education, health and community facilities and services, as well as integrated spaces for gathering (see Section 14.4, 15.5 and 15.6 of the Guideline).* *2. When planning for and designing cultural infrastructure the proponent is to engage with relevant Traditional Custodians and other Aboriginal stakeholder types (i.e., Knowledge Holders, LALCs, Service providers and the local Aboriginal and Torres Strait Islander community) where appropriate (Section 2.1.2 of the Guideline).*	• The Master Plan has been prepared in consultation with Aboriginal Stakeholders, refer to the Aboriginal Engagement Outcomes Report at **Appendix T.** • The Master Plan has identified requirements of cultural infrastructure based on identified the potential needs at a local/district and regional level. Consideration has been given to education, community and culture, and civic spaces infrastructure for future development on the Master Plan Site. The social infrastructure requirements for Bradfield City Centre on a local and district level are outlined within the Social Infrastructure Strategy, **Appendix N**. • The Master Plan has detailed potentially appropriate Master Plan Sites (location and size) and indicative provision of cultural infrastructure based on the identified need. For further information, refer to the Urban Design Report, **Appendix B.** • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
PO6	*Cultural narratives are embedded in public art.*	1. *Public art should respond to culture and Country, particularly within identified areas of significant Aboriginal heritage and value.* 2. *Where a development proposal has identified the opportunity to deliver public art that is responsive to culture and Country, an Aboriginal person with a connection to Western Sydney is to be engaged to:* a. *Provide input into the preparation of the public art brief, and* b. *Contribute to the design of the public art.*	• The Master Plan has been prepared to allow the provision of public art which can respond to culture and Country. Refer to the Art and Culture Strategy Report at **Appendix X** and the Response To Country Report at **Appendix C.** • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
Language and naming			
PO7	*Place names incorporate local Aboriginal language to enhance and strengthen the cultural connection to place.*	1. *Where an existing geographical feature or public place already has a non- Aboriginal name, dual naming with the Aboriginal name, should be assigned where appropriate. More information can be found within the NSW Geographical Names Board's Dual Naming – Supporting Cultural Recognition factsheet.* 2. *New development including suburbs, public spaces, places, roads, or administrative areas should give preference to the use of local Aboriginal language for naming purposes.* 3. *For Aboriginal naming and dual naming, the proponent is required to consult with the NSW Geographical Names Board, Traditional Custodians, local language subject matter experts (and Knowledge Holders where appropriate) (Section 2.1.2 of the Guideline).*	• The Master Plan has included connecting with Country principles, including providing recommendations on the naming of cultural infrastructure. Refer to the Response To Country Report at **Appendix C** and the Urban Design Report at **Appendix B**. • The naming of individual public spaces, roads and areas will be determined at the relevant detailed design stages.
2.2 Heritage			
2.2.1 Aboriginal Cultural Heritage			
PO1	*New development adjacent to or within the vicinity of an item or place of Aboriginal heritage significance or cultural value should not impact*	1. *New development is appropriately Master Plan Sited to ensure that the curtilage or setting of the Aboriginal item or place of cultural value is retained.*	• The Master Plan has been informed by the identification and assessment of any Aboriginal objects or places within the Master Plan Site. Refer to the Aboriginal Cultural Heritage Assessment Report prepared by Extent Heritage at **Appendix U**. • Further assessment against this requirement is subject to the relevant

Performance Outcome		Benchmark Solution (summarised)	Addressed by Master Plan Response
	on that item, or place. *Development is to consider visual and physical connections between items and places.*		Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
PO2	*Heritage items and landscapes shall provide for long-term conservation outcomes.*	1. *Development on Master Plan Sites containing heritage is to provide opportunities for people to engage with heritage and culture. This may include heritage or cultural values interpretation, artwork, signage, and or public access. Any interpretation or signage is to be delivered in consultation with relevant Aboriginal stakeholders, considering the sensitivity of Aboriginal cultural heritage, knowledge, and values.*	• The Master Plan has included connecting with Country principles, including providing recommendations on the naming of public places. Refer to the Response To Country Report at **Appendix C** and the Urban Design Report at **Appendix B**. • The Master Plan has been informed by the identification and assessment of any Aboriginal objects or places within the Master Plan Site. Refer to the Aboriginal Cultural Heritage Assessment Report prepared by Extent Heritage at **Appendix U**. • Consultation will be undertaken at the relevant detail design stage with relevant Aboriginal stakeholders. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
PO3	*The archaeological potential of Master Plan Sites is to be determined as part of detailed Master Plan Site investigations.* *Aboriginal archaeological Master Plan Sites are conserved, and significant archaeological remains are protected and interpreted.*	1. *Any land with the potential to contain archaeological remains is to be subject to detailed investigations and assessment to determine the level of archaeological intervention required. Intervention may include the following:* a. *Unexpected finds procedure;* b. *Monitoring during works; or* c. *Formal salvage excavation.*	• The Master Plan has been informed by the identification and assessment of any Aboriginal objects or places within the Master Plan Site. Refer to the Aboriginal Cultural Heritage Assessment Report prepared by Extent Heritage at **Appendix U**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.1.2 Non-Aboriginal And European Heritage			

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
PO1	*Inappropriate or unsympathetic alterations and additions of heritage items are removed, and significant missing details and building elements are reinstated.*	1. *Alterations and additions to existing heritage items do not dominate or detract from the original building in terms of scale, materials, siting, landscaping, and views.*	• No alterations and additions to an existing heritage item is proposed as part of the Master Plan Application.
PO2	*The impact of new development adjacent to or within the vicinity of a heritage item is minimised.*	1. *Development in the vicinity of a heritage item minimises the impact on the setting of the item by:* a. *Providing an adequate area around the building to allow interpretation of the heritage item;* b. *Retaining original or significant landscaping (including plantings with direct links or association with the heritage item);* c. *Protecting and allowing the interpretation of archaeological features; and* d. *Retaining and respecting significant views to and from the heritage item.*	• The Master Plan Site does not contain any registered or local or state significant heritage items. There are heritage items on surrounding Master Plan Sites to the Master Plan Site. Refer to the Statement of Heritage Impact at **Appendix S.** • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
PO4	*Archaeological Master Plan Sites are conserved, and significant archaeological remains are protected and interpreted.*	1. *Any works that may impact a known, or potential, archaeological Master Plan Site must have an archaeological assessment undertaken to determine the archaeological significance of the Master Plan Site and appropriate management procedures.*	• Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.3 Stormwater, Water Sensitive Urban Design, and Integrated Water Management			
2.3.1 Water Health and Riparian Corridors The Master Plan includes additional DCP provisions related to this Section of the Phase 2 DCP.			
PO1	*Development retains and restores native vegetation and riparian corridors.*	1. *Development maintains and protects waterways in accordance with the following guidelines:*	• The Master Plan has been designed based on a landscape led approach that includes responding, retaining, and enhancing waterways including Thompsons Creek. Refer to the Urban Design Report at **Appendix B.**
PO2	*Protect key aquatic habitat where it occurs.*	1. *Where aquatic habitat exists, proposed development responds to Policy and Guidelines for Fish Habitat Conservation and Management by*	• Future Development Applications will respond to the Policy and Guidelines for Fish Habitat Conservation and Management where relevant.

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
		the Department of Primary Industries and other relevant guidelines.	• Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
PO3	*Development provides increased connectedness to high quality passive open space and the blue-green grid.*	*Road crossings across a waterway of Strahler Order 2 or higher are to be designed to minimise impacts to vegetated riparian areas and species movements in accordance with NSW Department of Primary Industries' requirements to maintain fish passage.*	• Any future road crossing will be designed to minimise impacts to vegetated riparian areas and species movements. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.3.2 Stormwater Management and Water Sensitive Urban Design The Master Plan includes additional DCP provisions related to this Section of the Phase 2 DCP.			
PO1	*Development applications must demonstrate compliance with the stormwater quality always targets through interim stormwater management measures incorporated within the development, or by connection to the regional stormwater system once operational.*	1. *Compliance with the water quality targets below are satisfied where development applications demonstrate:* a. *To the satisfaction of the Stormwater Management Authority and the consent authority that stormwater discharge from the development will flow into the regional stormwater system; and* b. *The requirements of PO4 in Section 2.3.2 are met.* 2. *Where the Stormwater Management Authority indicates that the regional stormwater system will not be in place to service the development interim measures must be included to achieve the waterway health objectives of the Aerotropolis Precinct Plan. Interim stormwater management measures are to be designed to achieve the stormwater quality targets listed in the table below:*	• The Master Plan has been designed to provide stormwater management and Water Sensitive Urban Design measures to ensure that water quality targets can be met. Refer to the Integrated Water Cycle Management Report at **Appendix I**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent. • The Master Plan includes additional DCP provisions. Refer to the Discussion Paper at **Appendix HH**
2.3.3 Management and Access to Regional Stormwater Infrastructure and Waterways			

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
PO1	*Regional infrastructure Stormwater assets (including land and infrastructure) are managed and maintained by the stormwater drainage manager.*	1. *Where land for regional infrastructure stormwater assets (including open drainage corridors as a part of riparian streets) are not identified for acquisition on the Land Reservation Acquisition Map in State Environmental Planning Policy (Precincts – Western City) 2021 development is to:* a. *Provide an allocation of sufficient, suitably located land area to allow for stormwater assets in agreement with the stormwater drainage manager.* b. *Where stormwater assets are not dedicated to Sydney Water, appropriate legal access rights are required for ongoing management and maintenance. The legal right of access must be undertaken in consultation with the Regional Stormwater Authority, Sydney Water.* c. *All costs associated with the value of land and easement creation are to be borne by the developer.*	• Consultation has been undertaken with the relevant authorities during the preparation of the Master Plan. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.4 Vegetation and Biodiversity The Master Plan includes additional DCP provisions related to this Section of the Phase 2 DCP.			
PO1	*Consolidate areas of deep soil and tree canopy and provide minimum dimensions which allow for sufficient tree planting.*	1. *Tree canopy and deep soil is provided in accordance with* ***Table 2*** *Applicants must also have regard for the Master Plan Site coverage and relevant pervious surface targets outlined in this DCP.* 2. *Deep soil areas are to be a minimum 3m by 3m in dimension.*	• The Master Plan has been designed to conserve and manage the existing vegetation on Master Plan Site. The Master Plan will allow for the regeneration and increasing of habitat and tree canopy across the Master Plan Site meeting the overall 40% target of urban tree canopy cover. Refer to Urban Design Report at **Appendix B**.
Protection of Biodiversity			

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
PO2	*Populations of threatened species are retained, and the condition of suitable habitat improves within areas of the Cumberland subregion most likely to support long-term viability.*	1. *Mitigation to be undertaken in accordance with the following best practice guidelines for threatened ecological communities (TEC):* a. *Best Practice Guidelines: Cooks River/Castlereagh Ironbark Forest (NSW Department of Environment and Climate Change, 2008) within and adjacent to the TEC; and* b. *Recovering Bushland on the Cumberland Plain: Best Practice Guidelines for the Management and Restoration of Bushland (NSW Department of Environment and Climate Change, 2005)*	• The Master Plan has been prepared to protect and enhance the native vegetation communities, threatened ecological communities, significant tree habitats and the overall increasing of urban tree canopy cover. The Master Plan seeks to provide climate change impact mitigation strategies. Refer to the Urban Design Report at **Appendix B**, Sustainability Report at **Appendix L** and the Biodiversity Strategy and Impact Assessment at **Appendix M**.
PO6	*Bushfire risk is minimised.*	*Ensure appropriate fire management regimes and hazard reduction techniques for native vegetation areas, waterways, and riparian zones.*	• The Master Plan has been prepared to respond to bushfire hazards to protect life, property, the community and minimise impacts on the environment. Refer to the Bushfire Strategy and Impact Assessment Report at **Appendix Y**. • The Master Plan provides recommendations for future considerations at the detailed design stage which include compliant access, provision of perimeter roads adjacent to all hazards, capability for compliant APZs, management of APZs. Refer to the Bushfire Strategy and Impact Assessment Report at **Appendix Y**.
2.4.3 Protection of Trees and Vegetation			
PO1	*Existing trees and vegetation are retained, protected, enhanced, and incorporated into the development, wherever possible.*	1. *Development is designed to minimise impacts on trees, except for invasive species and/or noxious weeds.* 2. *Development is designed to minimise removal of trees (includes vehicular access, utility installations and ancillary development).*	• The Master Plan has been designed to minimise impacts on natural vegetation and trees. The Master Plan provides for a sustainable city centre through the provision of blue, green links, trees and landscaping contributing to the vision of a green Western Parkland City. Refer to the Urban Design Report at **Appendix B** and the Biodiversity Strategy and Impact Assessment Report at **Appendix M**.
2.4.4 On Lot and Streetscape Landscaping and Preferred Plan Species			
PO1	*Plant species are provided in accordance with the preferred species identified*	*Landscaping in development is to incorporate a diverse range plant species, as per the Aerotropolis DCP preferred Species List provided at **Appendix B** of this DCP. Prioritise use of Cumberland species, followed by other species that are*	• The Master Plan has been prepared in respect of the Species List. Individual Development Applications will provide the relevant level of detail

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
	for the Aerotropolis.	*suitable for the purpose and the microclimatic conditions of the Master Plan Site.*	regarding landscaping design and exact Species. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
P02	*Landscape design reflects the cultural landscape and is integrated with the design intent of the architecture and built form.*	1. *Landscaping is to highlight architectural features, define entry points, indicate direction, and frame and filter views into the Master Plan Site along sight lines.* *Size and scale of landscaping is responsive to the bulk and scale of the development.*	• Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.4.5 Street Planting and Requirements			
PO1	*Development is to incorporate street trees within public road reserves, designed to be passively irrigated through the stormwater drainage system and maximise stormwater losses through evapotranspiration.*	1. *Street Tree heights and canopy spread are to be commensurate with the road reserve dimension.*	• The Master Plan has been deigned to ensure that street trees are provided consummate with the road reserve dimensions and design, refer to the street layout plans within the Urban Design Report at **Appendix B**.
PO3	*Streets trees mitigate urban heat.*	1. *Provide 50% of north-south oriented streets with shade for active transit users during the hottest times of the day.*	• The Master Plan has been designed to provide trees along streets contributing to the mitigation of urban heat. Refer to the street layout plans within the Urban Design Report at **Appendix B** and the Sustainability Report at **Appendix L**.
2.5 Flooding and Environmental Resilience Management The Master Plan includes additional DCP provisions related to this Section of the Phase 2 DCP.			
PO1	*Conveyance and storage of floodwaters through the floodplain is managed.* *The siting and layout of development considers flood constraints, including risks to personal safety during the full range of floods.* *The Master Plan Site layout and built form of the development is compatible with flood constraints and potential risk.*		• The Master Plan has been prepared to manage the impacts of flooding. Refer to the Flooding Impact Assessment **Appendix K** and the Integrated Water Cycle Management Report at **Appendix I**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent
PO2	*Development has minimal impact on flood behaviour.*		

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
PO3	*Structures are designed and constructed so that they remain structurally sound for the life of the development considering flood and debris forces.*		assessment and development consent.
PO4	*All fill ensures the long-term stability of the development Master Plan Site and is not affected by erosion.*		
PO5	*The safety of users of developed areas located on the floodplain for the full range of flooding is ensured.*		
PO6	*Public safety and the environment are not adversely affected by the detrimental impacts of floodwater on hazardous materials manufactured or stored in bulk.*		
PO7	*Fencing is designed and constructed so that it does not impede and/or direct the flow of floodwaters, add debris to floodwaters or increase flood affectation on surrounding land.*		
2.5.2 Mitigation Urban Heat Island Effect			
PO1	*Master Plan Site layout of development and public domain mitigates urban heat island effect.*	1. *Evaporative cooling is enabled through implementation of design initiatives and features, including:* a. *Misting infrastructure in public places during high and extreme heat days; and* b. *Irrigation of private open spaces (using harvested stormwater) with 50% of grassed areas and 100% trees irrigated.*	• The Master Plan has been designed to include water sensitive urban design, sustainability measures and principles which can mitigate the urban heat island effect. Refer to the Urban Design Report at **Appendix B**, Sustainability Report at **Appendix L,** and Integrated Water Cycle Management Report at **Appendix I**.
PO2	*Buildings minimise cooling demand indoors and heat absorbance through orientation, the design of roofs and facades and materials.*	1. *Orientate buildings to take advantage of prevailing winds, natural ventilation, and solar access.*	• The Master Plan has been prepared in respect and consideration of the existing landscape to take advantage of solar access, natural ventilation, and wind. Refer to the Urban Design Report at **Appendix B** and the Pedestrian Wind Environment Review Report at **Appendix R**.
2.5.3 Salinity			
PO1	*The extent and location of salinity in the landscape and hydrogeologic regimes are accurately identified.*	1. *Undertake salinity investigations prior to development and prepare a Salinity Management Plan.*	• The Master Plan is designed using a landscape-led approach which will minimise the potential for environmental impacts from development on salinity. • Detailed Salinity investigations will be undertaken at the relevant Development Application Stage. Refer to the Earthworks Report at **Appendix W**. • Further assessment against this requirement is subject to the relevant

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
			Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.5.4 Acid Sulfate Soils			
PO1	*Acid sulfate soils are managed during development to ensure reuse of acid sulfate soil (with treatment) is considered and managed with no adverse impact to the environment, waterways, and infrastructure.*	1. *An Acid Sulphate Soils Assessment is to be provided with all development applications.*	• The Master Plan is designed using a landscape-led approach which will minimise the potential for environmental impacts from development on acid sulfate soils. • Detailed acid sulphate soil assessments will be undertaken at the relevant Development Application Stage. Refer to the Earthworks Report at **Appendix W**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.5.5 Erosion and Sediment Control			
PO1	*Development is to ensure 80% of all flows leaving the construction Master Plan Site achieves total suspended solids of 50mg/L or less and a pH of 6.5-8.5 during the construction and building phases until the Master Plan Site is stabilised and landscaped*	1. *An Erosion and Sediment Control Plan (ESCP) must be submitted for Master Plan Sites less than 2,500sqm and a Soil and Water Management Plan must be submitted for Master Plan Sites greater than 2,500sqm. These plans must be prepared in accordance with Appendix D.21.*	• Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.6 Road Design for Arterial and Sub-arterial Roads The Master Plan includes additional DCP provisions related to this Section of the Phase 2 DCP.			
PO1	*The design, functionality and safety of arterial and sub- arterial roads is consistent across the Aerotropolis Growth Area.*	1. *Direct vehicle access to properties from the Arterial and Sub-Arterial roads identified in the Precinct Plan is not permitted, except for land uses that require or benefit substantially from access to major roads (for example service stations) and where approval is obtained from the relevant road's authority.* 2. *Road design for Primary Arterial Roads, Primary Arterial Roads (Rapid Bus), and Sub- arterial Roads as identified on the Precinct Plan are to*	• The Master Plan has provided road layout and designs, refer to the Urban Design Report at **Appendix B**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.

Performance Outcome		Benchmark Solution (summarised)	Addressed by Master Plan Response
		be consistent with the typical arrangements shown below in Figure 5 to Figure 7.	
2.7 Parking and Design			
PO1	*The design and layout of car parking and vehicular access is safe and functional.*	*Parking is to meet AS 2890 and AS 1428.*	• The Master Plan does not seek development consent for any car parking. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.8 Travel Demand Management			
PO1	*Travel Plans are provided to include measures that reduce car dependency for new developments by encouraging sustainable transport modes.*	1. *A Travel Plan must be submitted for:* a. *Any residential developments containing more than 50 residential units; and* *Any commercial or industrial developments which accommodates more than 50 employees.*	• A Transport Management Access Plan supports the Master Plan.
2.10 Airport safeguarding			
PO1	*Development does not generate turbulent emissions into the protected airspace.*	1. *Any plumes caused by a development do not:* a. *Have peak vertical velocities of more than 4.3m/sec; or* b. *Incorporate flares, unless an aviation impact assessment is completed and determines flares are acceptable.*	• The Master Plan does not seek consent for any plumes or industrial uses which may impact the protected airspace. • The Master Plan outlines that future Development Applications will need to address the Aviation Safeguarding Guidelines and the relevant provisions of the Section 2.10 of the Phase 2 DCP.
PO2	*Development does not impact on aviation or the operation of the Airport regarding light emission and reflective surfaces.*	1. *Development must comply with the provisions of the Civil Aviation Regulations 1988 (Cth) and not cause distraction or confusion to pilots due to its configuration, pattern or intensity or prevent clear reception of aerodrome lights or signals.*	• The Master Plan has been designed in response to the existing topography, Master Plan Site conditions and controls in relation to the future operation of the Western Sydney Airport. Refer to the Urban Design Report at **Appendix B** and the Aviation Impact Assessment Report at **Appendix J**. • The Master Plan outlines that future Development Applications will need to address the Aviation Safeguarding Guidelines and the relevant provisions of the Section 2.10 of the Phase 2 DCP.
2.10.2 Noise			

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
PO1	*Development within the ANEC 20 and above contours (including extensions to existing development) is constructed to achieve indoor design sound levels as per the Indoor Design Sound Levels for Determination of Aircraft Noise Reduction in AS 2021 – Acoustics Noise* *Intrusion – Building Siting and Construction.*	1. *Residential development is constructed in accordance with Table 3.* 2. *An acoustic report is provided which specifies the construction standards required to achieve the specified indoor design sound levels.*	• The Master Plan has been designed in response to the future operation of the Western Sydney Airport. Refer to the Urban Design Report at **Appendix B**, Aviation Impact Assessment Report at **Appendix J**, and Noise and Vibration Impact Assessment Report at **Appendix Q**. • Future Development Applications will prepare an acoustic report which responds to the relevant standards. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.10.3 Wildlife			
PO2	*Landscaping does not attract wildlife that could create a safety hazard to the operations of the Airport.*	1. *Refer to Appendix B for a list of suitable landscape species.* 2. *In areas within the 3km wildlife buffer but outside of the Parkland Priority Areas shown in Figure 8, a report prepared by a suitability qualified and experienced ecologist is to be submitted with any application when the landscaping plan:* a. *Incorporates alternative landscape species not listed within Appendix B;* b. *Incorporates landscape species denoted within the landscape species list;* c. *Will result in more than 5 trees being planted in 1 group (group refers to touching mature canopies); and/or* d. *Provides a spacing between a group of 5 or more trees that is less than 100m.*	• The Master Plan Site excluded from the Wildlife Buffer as the Master Plan Site is within the Parkland Priority Areas which are included within the Phase 2 DCP. • The Master Plan has also been designed in response to the future operation of the Western Sydney Airport. Refer to the Urban Design Report at **Appendix B** and Aviation Impact Assessment Report at **Appendix J.** • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.1 Services and Utilities			

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
PO1	*Master Plan Site is serviced with electricity.*	1. *Meet the design requirements as per the Western Sydney Street Design Guidelines Section C5.4 Electricity.*	• The Master Plan can be serviced by key services and utilities. Services and utilities will be provided into the Master Plan Site as development is completed. Refer to the Utility Infrastructure and Servicing Report at **Appendix H**. • Future Development Applications will provide the relevant and specific detail on services and utilities. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
PO7	*Development is to be serviced by recycled water.*	1. *Where a recycled water scheme (supplied by stormwater harvesting and/or recycled wastewater) is in place, development shall:* a. *Be designed in a manner that does not compromise waterway objectives, with stormwater harvesting prioritised over reticulated recycled water;*	
2.12 Sustainability The Master Plan includes additional DCP provisions related to this Section of the Phase 2 DCP.			
PO1	*Incorporate renewable energy systems to ensure all buildings can achieve a 100% renewable energy supply by 2030.*	1. *All developments demonstrate how 100% renewable energy supply can be achieved by 2030, whether on or off Master Plan Site.*	• The Master Plan has been designed with sustainability principles embedded for future development. Refer to the Sustainability Strategy at **Appendix L**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.13 Smart Places			
PO3	*Buildings utilise smart technologies to promote performance, sustainability, resilience, and resource management throughout their operational lives.*	1. *Where new connections to the water and recycled network are proposed, include smart water meters and fittings to minimise water consumption.* 2. *Use smart technologies to monitor and self-regulate building environment and operations (e.g., lighting, heat, ventilation, and air conditioning).* 3. *Install smart energy solutions to increase self-sustainability and reduce reliance on the main energy grid.* 4. *Demonstrate alignment to relevant NSW policy, including but not limited to the NSW Internet of Things (IoT) policy, NSW Cyber Security Policy, and NSW Smart Infrastructure Policy.*	• The Master Plan incorporates initial, medium, and long term staged Smart Cities technology to enable smart buildings and an urban environment, which will promote sustainability and resilience. Refer to the Smart Cities Implementation Plan and Assessment Report at **Appendix F**. • Future Development Applications will need provide this level of smart technology detail into the buildings, urban environment, and the public domain. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
PO4	*Embedding smart technologies enhances experiences in the public domain and creates liveable public open spaces.*	1. *Install smart monitoring equipment, including for water quality, ambient temperature, tree canopy cover and soil moisture content, cycle, and car movements. Specific monitoring requirements for each development are provided by the consent authority.*	
2.14 Design for Safe Places			
PO1	*Passive surveillance is maximised.*	1. *Visibility and surveillance are provided in all areas of development.* 2. *Adjoining buildings overlook public places.* 3. *Building frontages face streets and transport corridors to provide passive surveillance.*	• The Master Plan has been designed to ensure that the street and urban layout provides passive surveillance on the streets, public domain, and transport corridor areas of the Master Plan Site. Refer to the Urban Design Report at **Appendix B**. • Future Development Applications will be prepared in respect of Crime Prevention Through Environmental Design Principals. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.15 Universal Design and Access			
PO1	*Buildings and public places are designed for equity, accessibility, and safety.*	1. *Paths, ramps, steps, and lifts comply with AS 1428-2009 Design for Access and Mobility.*	• This level of design specification will be completed at the relevant Development Application Stage. • Future Development Applications will ensure that the buildings and public places are designed for equity, accessibility, and safety for members of the community.
2.16 Waste Management and Circular Economy			
PO1	*Waste management measures are implemented at lot and neighbourhood scale to support circular economy activities.*	1. *Submit a waste management plan to support circular economy activities that also details the quantity and type of waste generated and how this will be managed, reused, and recycled.*	• The Master Plan has been prepared in consideration of waste management and the circular economy. The Master Plan provides for a circular economy framework for which future development will consider and contribute towards. Refer to the Circular Economy (Waste and Services) Report at **Appendix CC**.
2.18 Earthworks and retaining Walls			
PO1	*To ensure Master Plan Site planning considers the stability of land, its topography, geology, and soils.*	1. *Master Plan Site planning is to respond to the natural topography of the Master Plan Site and protect vegetation, particularly where it is important to Master Plan Site stability.*	• The Master Plan has been designed from a landscape led approach which has considered and responded to the existing natural topography of the Master Plan Site and to protect and enhance natural vegetation. Refer to the Urban Design Report at **Appendix B** and the Biodiversity Strategy and

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
		2. *A Geotechnical Report is to be submitted with applications proposing to change Master Plan Site levels.* 3. *Excavation and fill shall be adequately retained and drained in accordance with the Western Sydney Engineering Design Guidelines.*	Impact Assessment Report at **Appendix M**. • Future Development Applications will be submitted with a Geotechnical Report. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
2.19 Public Art The Master Plan includes additional DCP provisions related to this Section of the Phase 2 DCP.			
PO1	*High-quality public art is integrated into the design and function of the development to embellish and enliven the public domain.*	1. *The strategy should respond to cultural values mapping to deliver a suitable artwork for the development demonstrating that the scale of the public art provided is commensurate to the intensity of use at the Master Plan Site or landscape.*	• The Master Plan has been designed to include places and spaces which will include high quality public art in the public domain. Refer to the Art and Culture Strategy Report at **Appendix X**.
3.0 Development for Enterprise and Industry, and Agribusiness The Master Plan includes additional DCP provisions related to this Section of the Phase 2 DCP.			
3.1 Local Road network and design			
PO1	*To enable a road network that is safe and efficient for all users and minimises through traffic on minor roads.*	1. *Road design for local streets, collector streets and park edge streets as identified on the Aerotropolis Precinct Plan are to be consistent with the typical road cross-sections in this **Figure 10** to **Figure 12***.	• Amendments are proposed to the Aerotropolis Precinct Plan, refer to the Discussion Paper at **Appendix HH** • The Master Plan has provided for the design for roads, road hierarchy and road layouts across the Master Plan Site. The Master Plan has been prepared in consideration of a traffic management, public transport usage and the promotion of cycling and walking. Refer to the Urban Design Report at **Appendix A** and the Traffic Management Accessibility Plan Report at **Appendix G**.
3.2 Parking and Travel Management			
PO1	*To facilitate an appropriate number of vehicular spaces having regard to the industrial and agribusiness nature of the locality.*	1. *On-Master Plan Site car parking is to be provided in accordance with **Table 3**.* *For activities not identified in Table 3, the TfNSW' (formerly RTA) Guide to Traffic Generating Developments (ISBN 0 7305 9080 1) should be referred to as a guide.*	• Future Development Applications will provide this level of detail regarding On-Master Plan Site car parking provision having consideration of the nature of the locality. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
3.3.1 Building siting and design			

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
PO1	*To encourage building form that responds to the topography of the Master Plan Site and the relative position of the allotment to other allotments and the street.*	*1. Building height should respond to the natural landscape and scale of adjoining development, with lower elements towards the street, pedestrian paths, adjoining rural-residential areas, environmental and open space areas, riparian corridors, and ridgelines.*	• Refer to the Discussion Paper at **Appendix HH** • The Master Plan provides for building siting, setbacks and building heights which respond to the natural environment and the proposed urban layout across the Master Plan Site.
3.3.2 Building Setbacks			
PO1	*To provide a consistent streetscape design and landscaped transition to the public realm.*	1. *Building setbacks are to be in accordance with **Table 5**.*	• Amendments are proposed to the Aerotropolis Precinct Plan, Refer to the Discussion Paper at **Appendix HH** • The Master Plan for building setbacks and the proposed urban layout across the Master Plan Site and will allow for activation across the Site.
4.0 Non-Residential development in centres			
4.1.1 Street Design			
PO1	*The design, functionality and safety of Collector and Local roads within Centres is consistent across the Aerotropolis.*	*1. Road design for Collector and Local roads within as identified on the Aerotropolis Precinct Plan are to be consistent with the typical arrangements shown in **Figures 13** to **Figure 16**.*	• Amendments are proposed to the Aerotropolis Precinct Plan. Refer to the Discussion Paper at **Appendix HH.** • The Master Plan has provided design for roads, road hierarchy and road layouts across the Master Plan Site. The Master Plan has been prepared in consideration of a traffic management, public transport usage and the promotion of cycling and walking. Refer to the Urban Design Report at **Appendix A** and the Traffic Management Accessibility Plan Report at **Appendix G**.
4.2 Built Form			
PO1	*Building massing responds to context and future character including significant landforms, topography, landscape, built environment and the public domain.*	1. *Building design responds appropriately to topography, with regular transitions that maximise integration between ground floor level and street level.* 2. *Building design is to incorporate a variety of materials and a schedule of materials and finishes is to accompany all development proposals.*	• The Master Plan provides setbacks and street walls to activate and define the public domain which respondents the topography and landscape. Building and ground level setbacks respond to the street hierarchy and allow the provision of tree canopy, deep soil, and landscape zones. Future developments will be orientated towards blue-green corridors to provide connections to country, surveillance, and activation along interfaces. Refer to the Response To Country Report at

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
			Appendix C and the Urban Design Report at **Appendix B**. • Amendments are proposed to the Phase 2 DCP, refer to the Discussion Paper at **Appendix HH**.
4.2.3 Building setbacks and separation			
PO1	*Building setbacks and separation provide for variation of built form in the street, and adequate upper building separation to support privacy, ventilation, and solar access.*	1. *In a commercial building, the setbacks for podium and tower elements are as follows:* a. *Ground floor and podium: Nil setback (built to the property boundary).*	• Future Development Applications will provide this level of detail for the design and development of commercial buildings. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.
5.0 Residential Development The Master Plan includes additional DCP provisions related to this Section of the Phase 2 DCP.			
5.1 Road network and design			
PO1	*The design, functionality and safety of Collector and Local roads within Centres is consistent across the Aerotropolis.*	*1. Road design for Collector and Local roads as identified on the Aerotropolis Precinct Plan are to be consistent with the typical arrangements shown in **Figure 18** to **Figure 21**.*	• Amendments are proposed to the Phase 2 DCP, refer to the Discussion Paper at **Appendix HH**. • The Master Plan has provided for the design for roads, road hierarchy and road layouts across the Master Plan Site. The Master Plan has been prepared in consideration of a traffic management, public transport usage and the promotion of cycling and walking. Refer to the Urban Design Report at **Appendix A** and the Traffic Management Accessibility Plan Report at **Appendix G**.
5.2 Building Design			
PO1	*Building massing responds to context and future character including significant landforms, topography, landscape, built environment and the public domain.*	*Building design responds appropriately to topography, with regular transitions that maximise integration between ground floor level and street level.*	• The Master Plan has been designed to ensure that future residential development is well designed, responsive to the Master Plan Site, has adequate setbacks, will achieve high amenity, and has access to the natural landscape and public domain. Future developments will be orientated towards blue-green corridors to provide connections to country, surveillance, and activation along interfaces. Refer to the Urban Design Report at Appendix **B.** • Amendments are proposed to the Phase 2 DCP, refer to the Discussion Paper at **Appendix HH**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design

Performance Outcome		*Benchmark Solution (summarised)*	*Addressed by Master Plan Response*
			consideration and subsequent assessment and development consent.
5.2.3 Building setbacks			
PO1	*Building setbacks and separation for high density residential development provide for variation of built form in the street, and adequate upper building separation to support privacy, ventilation, and solar access.*	2. *Multi dwelling housing is to meet the following building setbacks and separation distances:*	• The Master Plan has been designed to ensure that future residential development is well designed and has adequate setback will achieve high amenity. Refer to the Urban Design Report at **Appendix B.** • Amendments are proposed to the Phase 2 DCP, refer to the Discussion Paper at **Appendix HH**. • Further assessment against this requirement is subject to the relevant Development Application stage for detailed development/design consideration and subsequent assessment and development consent.

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NSW GOVERNMENT