Douglas Partners
Geotechnics / Environment / Groundwater

Integrated Practical Solutions

Report on
Detailed Site Investigation (Contamination)

The Gables New Primary School
Fontana Drive, Gables

Prepared for
School Infrastructure NSW

Project 216255.01
November 2024

Document History

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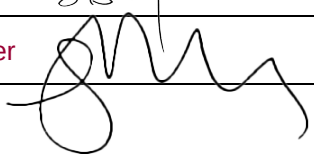
The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

	Signature	Date
Author		14 November 2024
Reviewer		14 November 2024

FS 604853

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Report on Detailed Site Investigation (Contamination)
The Gables New Primary School
Fontana Drive, Gables

1. Introduction

1.1 General

This Detailed Site Investigation (contamination) (DSI) report has been prepared by Douglas Partners Pty Ltd (DP) on behalf of NSW Department of Education (the Applicant) to assess the potential environmental impacts that could arise from the development of The Gables New Primary School at Lot 301 DP 1287967 on Fontana Drive, Gables (the site).

This report has been prepared to assess the suitability of the site for the proposed school development and whether further investigation and/or management of contamination is required.

This report accompanies a Review of Environment Factors (REF) that seeks approval for the construction and operation of a new primary school at the site, which involves the following works:

- Construction of school buildings, including learning hubs, a school hall and an administration and library building.
- Construction and operation of a public preschool.
- Delivery of a sports court and fields.
- Construction of car parking, waste storage and loading area.
- Associated site landscaping and open space improvements.
- Associated off-site infrastructure works to support the school, including (but not limited to) services, driveways and pedestrian crossings.

For a detailed project description, refer to the Review of Environmental Factors prepared by Ethos Urban.

The investigation was undertaken in accordance with the Standard Form Agreement SINSW00650/22 SINSW03210-22 dated 12 July 2022.

The site is shown on Drawing 1, Appendix A. This report must be read in conjunction with all appendices including the notes provided in Appendix B.

The following key guidelines were consulted in the preparation of this report:

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013); and
- NSW EPA *Guidelines for Consultants Reporting on Contaminated Land* (NSW EPA, 2020).

1.2 Statement of Significance

Based on the identification of potential issues, and an assessment of the nature and extent of the impacts of the proposed development, it is determined that:

- The extent and nature of potential impacts from the proposed development are low from an environmental engineering perspective, and will not have significant adverse effects on the locality, community and the environment if the comments and recommendations in this report are followed; and
- Potential impacts can be appropriately mitigated or managed to ensure that there is minimal effect on the locality, community by following the comments and recommendation in this report.

1.3 REF Deliverable Requirements

The REF deliverable reporting requirements relevant to this report are summarised in Table 1.

Table 1: Summary of Relevant REF Requirements

Item	REF Requirement	Relevant Section of Report
55	In accordance with Chapter 4 of SEPP (Resilience and Hazards) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the development.	Section 6 summarise of Preliminary Site Investigation results Section 8 Sampling and analysis quality plan Section 9 Site assessment criteria Section 10 Field work results Section 11 Discussion of soil investigation results
56	In relation to Contamination and Remediation, if required, provide a Remediation Action Plan (RAP) including Interim Audit Advice from an EPA-accredited Site Auditor certifying the RAP as appropriate.	Section 12 Conclusions and Recommendations. Based on the results of the DSI it is considered that the site is suitable for the proposed primary school development, without the requirement for an RAP, subject to implementation of the following recommendations: • An unexpected finds protocol (UFP) should be prepared and implemented during site works to address any potentially impacted fill (including asbestos contamination); and • Additional assessment as required to provide a final waste classification for surplus soils requiring off-site disposal. A separate report (DP, 2024b) has been prepared by Douglas Partners which

Item	REF Requirement	Relevant Section of Report
		provides advice on the requirements including the development of a UFP and additional waste classification (Ref: 216255.01.R.003.Rev2)

2. Site Description

The site is located on Cataract Road, Gables, within The Hills Local Government Area (LGA), approximately 50km northwest of the Sydney CBD and 10km north of the Rouse Hill Town Centre. It comprises one lot, legally described as Lot 301 DP 1287967, that measures approximately 2.2ha in area. The site is bound by Pennant Way to the north, Cataract Road to the east, Fontana Drive to the west and a vacant lot to the south. An aerial image of the site is shown at Figure 1.

Figure 1: Site Aerial (Source: Nearmap, edits by Ethos Urban)

The proposed development is outlined in Section 1.1. The Overall Ground Level Plan (drawing no AR-SD2000) is included in Appendix A. It is understood that below ground basement structures are not currently proposed for the development, however, limited excavation may be necessary for foundations, localised leveling, landscaping and for the installation of buried services.

3. Scope of Work

The scope of work comprised:

- A review of the results of the Preliminary Site Investigation (PSI) report (DP, 2024a);
- A review of the proposed development details (as provided by the client);

- Conducting field works that considered of:
  - A review of service plans, scanning of test locations for buried services and surveying of test locations using a differential global positioning system (dGPS);
  - Preparation of a Field Work Safety and Environment Plan (FWSEP) and Safe Work Method Statement (SWMS);
  - Test pitting at 25 locations using an excavator. Each test pit was excavated to a depth of 0.5 m into natural soil, 3 m or prior refusal;
  - Logging of encountered soil materials and pertinent field information;
  - Collecting representative soil samples from eight geotechnical investigation boreholes (BH101 to BH108) and 25 test pits (TP109 to TP133) from various depths at each sample location; and
  - Screening all samples for volatile compounds using a calibrated photo-ionisation detector (PID).
- Laboratory testing of 40 primary soil samples at a National Association of Testing Authorities (NATA) accredited laboratory for various combinations of the following potential contaminants / analytes:
  - Metals (including Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Zinc) (HM);
  - Total recoverable hydrocarbons (TRH);
  - Benzene, toluene, ethylbenzene and xylenes (BTEX);
  - Polycyclic aromatic hydrocarbons (PAH);
  - Organochlorine pesticides (OCP);
  - Organophosphorus pesticides (OPP);
  - Polychlorinated biphenyls (PCB);
  - Total Phenols;
  - Herbicides;
  - Asbestos (~40 g samples);
  - Potential of Hydrogen (pH);
  - Cation Exchange Capacity (CEC);
  - QA / QC samples, comprising:
    - 5% intra-laboratory replicate samples (HM, PAH);
    - 5% inter-laboratory replicate samples (HM, TRH, BTEX, PAH, OCP, OPP, PCB, phenol);
    - Trip spike sample(s) (BTEX); and
    - Trip blank sample(s) (BTEX).
- Interpretation of the analytical results against the adopted Site Assessment Criteria (SAC);
- A data quality assessment;
- Update the preliminary conceptual site model (CSM) presented in the PSI; and
- Preparation of this DSI report.

4. Site Information

Site Address	Fontana Drive, Gables
Legal Description	Lot 301 DP 1287967
Area	2.21 hectares
Zoning	Zone B4 High density residential development
Local Council Area	The Hills Shire Council
Current Use	Vacant land
Surrounding Uses	North - Rural residential, vacant/agricultural land and bushland beyond East - Cataract Road, agricultural land and rural residential South - Residential house West - Fontana Drive, then vacant/residential houses

The site boundary is shown on Figure 1 in Section 2.

5. Environmental Setting

Regional Topography	Gently undulating and slopes towards the north-east.
Site Topography	The site is located on gently sloping terrain, with existing surface levels of approximately RL 38 m in the northwest and RL 34 m (relative to AHD) in the southeast.
Soil Landscape	Reference to the Sydney 1:100 000 Landscape Series Sheet indicates that the site is underlain by a soil landscape group known as the Blacktown Soil Landscape. The Blacktown soil landscape is a residual soil unit, sourced from the progressive weathering of the Ashfield Shale with local relief to 30 m and slopes typically less than 5% gradient. Soils are generally moderately deep (>1 m) and comprise red and brown podzolic soils with some deeper soils on lower slopes and in areas of poor drainage.
Geology	Reference to the Sydney 1:100 000 Geological Series map indicates that the site is underlain by Ashfield Shale, which typically comprises black to dark grey shale and laminite (finely interbedded sandstones and siltstones) and is part of the Wianamatta Group. Ashfield Shale overlies Hawkesbury Sandstone which is mapped approximately 800 m to the east of the site.
Acid Sulfate Soils	Reference to the 1:25 000 Acid Sulphate Soils (ASS) Risk map indicates that the site is in an area of no known occurrence of acid sulphate soils. Given the location of the site and the underlying geology, the risk of acid sulphate soils occurring on the site is considered to be very low.

5.1 Surface Water and Groundwater

The site slopes towards the southeast, with surface runoff appearing to collect to the east of the site (a previous creek tributary) and drain northwards to Cattai Creek.

A search of the publicly available registered groundwater bore database indicated that there are three registered groundwater bores within 1 km of the site. Relevant information for these wells as obtained from the WaterNSW database is summarised below:

Table 2: Summary of Available Information from Nearby Registered Groundwater Bores

Bore ID	Location Relative to Site	Authorised Purpose	Final Depth (m)	Standing Water Level (m bgl)
GW072083	400 m west	Private domestic stock water supply bore	304	-
GW100182	800 m north	Private domestic stock water supply bore	248	30
GW069066	700 m east	Domestic Bore of unknown purpose	96.5	23

Based on the reported geology, topography and depth to groundwater, groundwater migration is expected to occur in a northly direction, towards Cattai Creek. It is likely that some perched groundwater seepage will occur along the interface between residual soil and weathered rock, and the volumes of seepage are likely to increase following periods of prolonged rainfall.

6. Previous Reports and Site History

DP was commissioned by School Infrastructure NSW to conduct a PSI for the site.

The objective of the PSI was to assess the potential for contamination at the site based on past and present land uses and to comment on the need for further investigation and / or management with regard to the proposed development. The PSI comprised a desktop study, a site walkover, and development of a preliminary CSM. No intrusive investigations were conducted as part of the PSI.

The review of site history information indicated that the site was acquired by the current owner in 2020. Information on historical aerial photographs and historical title deeds suggested the site was vacant land prior to 1982, then since late 1980s the site appears to have been occupied by paddocks and market gardens. The southern part of the site was impacted by backfilling of a dam. The site had significant ground disturbance in/prior to 2016 in the undertaking of civil works for the Box Hill Town Centre and was subdivided as part of the Box Hill Town Centre. The historical agricultural / market garden site activities were considered to have potentially impacted the soils. In addition, the reclamation and filling of and around the farm dam suggested the potential for impacted materials to have been imported to the site for use as fill.

Based on the site history, the review of previous report conducted by others (JBS&G 2014)[1] and site walkover, the identified sources of contamination were fill, demolition / deterioration of former and existing buildings on site, former agricultural and market garden land uses, and surface stockpiles.

Based on the results of the PSI, the following were recommended prior to construction of the proposed public-school development:

- Detailed Site Investigation: A detailed site investigation (DSI) with intrusive soil sampling to evaluate the potential contamination status of the site and assess the site's suitability (from a contamination standpoint) for the proposed primary school development. In addition, the DSI should provide recommendations on the need for any further targeted investigation(s) and / or site remediation (if deemed necessary).
- Waste Classification: As part of the DSI and during excavation for the basement all soil / rock to be removed from the site will require classification for off-site disposal in accordance with the Protection of the Environmental Operations (POEO) Act. A preliminary waste classification can be incorporated into the scope of the DSI.

7. Preliminary Conceptual Site Model

A Conceptual Site Model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or the future i.e., it enables an assessment of the potential source – pathway – receptor linkages (complete pathways).

Potential Sources

Based on the CSM previously developed in the PSI, the following potential sources of contamination and associated contaminants of potential concern (CoPC) have been identified.

- S1: Fill: Possible filling (including historical burial of waste) as a result of historical site activities.
  - Various CoPC and may include metals, TPH, BTEX, PAH, PCB, OCP, OPPs, phenols and asbestos.
- S2: Historical agriculture (Market gardens and paddocks).
  - CoPC include metals, TRH, BTEX, PAH, OCP, OPP, pesticides, herbicides, phenols.
- S3: Surface debris / stockpiles.
  - CoPC include metals, TRH, BTEX, PAH, OCP, OPP, PCB, phenols and asbestos.
- S4: Former site structures / Potential asbestos containing material.
  - CoPC include lead paint, asbestos.

[1] JBS&G. (2014). *Report on Detailed Site Investigation, Box Hill North, NSW, dated 4 August 2014.* JBS&G Pty Ltd: Reference 43376/58442 (RevA).

Potential Receptors

The following potential human receptors have been identified:

- R1: Construction and maintenance workers;
- R2: End users [primary school and visitors]; and
- R3: Adjacent site users [residential and commercial].

The following potential environmental receptors have been identified:

- R4: Surface water [Cattai Creek];
- R5: Groundwater; and
- R6: Terrestrial ecosystems.

Potential Pathways

Potential pathways for contamination include the following:

- P1 - Ingestion and dermal contact;
- P2 - Inhalation of fibres and / or dust and / or vapours;
- P3 - Leaching of contaminants and vertical migration into groundwater;
- P4 - Surface water runoff;
- P5 - Lateral migration of groundwater providing base flow to watercourses; and
- P6 - Direct contact with ecological receptors.

Summary of Potentially Complete Exposure Pathways

A 'source–pathway–receptor' approach has been used to assess the potential risks of harm being caused to human or environmental receptors from contamination sources on or in the vicinity of the site, via exposure pathways (potential complete pathways). The possible pathways between the above sources (S1 to S4) and receptors (R1 to R6) are provided in below Table 3.

Table 3: Summary of Potentially Complete Exposure Pathways

Source and COPC	Transport Pathway	Receptor	Risk Management Action
S1: Possible fill S2: Historical agriculture and market garden S3: Surface debris / stockpiles	P1: Ingestion and dermal contact P2: Inhalation of dust and/or vapours P3: Leaching of contaminants and vertical migration into groundwater P4: Surface water runoff	R1: Construction and maintenance workers R2: Future site users R3: Adjacent site users R4: Surface water bodies R5: Groundwater R6: Terrestrial ecosystems.	Intrusive investigation to assess possible contamination including testing of the soils, reported herein.

Source and COPC	Transport Pathway	Receptor	Risk Management Action
	P5: Lateral migration of groundwater providing base flow to watercourses P6: Direct contact with ecological receptors		
S4: Former structures at the site / asbestos containing material	P1: Ingestion and dermal contact P2: Inhalation of dust and/or vapours	R1: Construction and maintenance workers R2: Future site users R3: Adjacent site users	

8. Sampling and Analysis Quality Plan

8.1 Data Quality Objectives

The DSI was devised with reference to the seven-step data quality objective process which is provided in Appendix B Schedule B2, NEPC (2013). The data quality objective process is outlined in Appendix C.

8.2 Soil Sampling and Analysis Rationale

Based on the CSM and data quality objectives (DQO) the following sampling rationale was adopted.

A systematic sampling strategy based on NSW EPA *Contaminated Sites, Sampling Design Guidelines* (NSW EPA, 2022) to determine borehole and test pit locations. Borehole and test pit locations are shown on Drawing 1, in Appendix A.

Table A of NSW EPA (2022) recommends a minimum of 30 sampling points for a site of up to 2 ha, and 35 samples for a site of up to 2.5 ha for site characterisation based on the detection of circular hot spots using a systemic grid sampling pattern. A total of 33 test locations were therefore positioned across the site.

Soil samples were collected from each borehole / test pit at depths of approximately 0.15 m, 0.5 m, 1.0 m and every 0.5 m thereafter (in fill), and changes in lithology or signs of contamination.

Selected soil samples from each location were analysed for varying combinations of the COPC identified in Section 7, with a bias towards fill samples. The analytes comprised heavy metal, TRH, BTEX, PAH, OCP, OPP, Phenols and asbestos. SMF was assessed visually.

Samples were analysed from borehole locations with shallow and deeper fill to provide data on the contaminant concentrations at varying depths in the fill. Two natural samples were analysed to provide data on contaminant concentrations as well as an initial virgin excavated natural material (VENM) assessment.

The general sampling methods are described in the field work methodology, included in Appendix D.

9. Site Assessment Criteria

The Site Assessment Criteria (SAC) applied in the current investigation are informed by the CSM (Section 7) which identified human and environmental receptors to potential contamination on the site. Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013).

The investigation and screening levels applied in the current investigation comprise levels adopted for a generic public school land use scenario. The derivation of the SAC is included in Appendix E and the adopted SAC are listed on the summary analytical results tables in Appendix F.

10. Results

10.1 Field Work Results

The borehole and test pit logs for this assessment are included in Appendix G. The logs recorded the following general sub-surface profile:

- Fill: Generally comprising brown / orange-brown / pale grey-brown / grey and dark grey sandy clay / clay / gravelly sandy clay / crushed sandstone / clayey sand with inclusions variably across the test locations including road base gravel, ironstone and sandstone gravel, sand, sandstone boulders, shale, and rootlets to depths of between 1.6 m and 7 m bgl in all test locations; underlain by
- Clay / Gravelly Clay / Silty Clay: brown / orange-brown / red-brown / grey-brown with inclusions variably across the test locations including ironstone, shale and sand observed in all deep boreholes (BH101 - BH108) to depths of between 5 m to 8.5 m bgl; underlain by
- Shale: grey and grey-brown shale observed in all deep boreholes (BH101 to BH108) from depths of between 5 m and 8.5 m to borehole terminated, other than BH103 where brown sandstone was observed from 7 m bgl to borehole terminate.

It was noted that refusal on sandstone boulders was encountered in several test pits (TP109, TP113-114, TP118, TP121-122, TP125-130, and TP133 from depths of between 0.7 m to 2.2 m bgl). As such, the full depth of fill at those locations is not known.

No visual or olfactory evidence (e.g. staining, odours, free phase product) was observed during the investigations to suggest the presence of contamination within the soils at the site.

No free groundwater was observed during excavation of test pits or drilling of boreholes. It should be noted that groundwater levels are affected by climatic conditions and soil permeability and will therefore vary with time.

10.2 Laboratory Analytical Results

The results of laboratory analysis are summarised in the following tables in Appendix F:

- Table 1: Summary of Results of Soil Analysis; and
- Table 2: Summary of Preliminary Waste Classification Assessment.

The laboratory certificates of analysis together with the chain of custody and sample receipt information are provided in Appendix H.

11. Discussion

11.1 Soils

The analytical results for TRH, BETX, PAH, Phenol, OPP, PCB and Herbicides tested in all samples were below the Practical Quantitation Limit (PQL) and the adopted SAC, while the analytical results for metals and OCP tested in all samples were below the adopted SAC.

11.2 Preliminary Waste Classification

11.2.1 Fill

NSW EPA (2014) contains a six-step procedure for determining the type of waste and the waste classification. Part of the procedure, for materials not classified as special waste or pre-classified waste, is a comparison of analytical data initially against contaminant threshold (CT) values specific to a waste category. Alternatively, the data can be assessed against specific contaminant concentration (SCC) thresholds when used in conjunction with toxicity characteristic leaching procedure (TCLP) thresholds.

The CT, SCC, and TCLP values relevant to this waste classification are shown in Table F2, presented in Appendix F.

Table 4 below presents the results of the six-step procedure outlined in EPA (2014) for determining the type of waste and the waste classification. This process applies to the fill at the site.

Table 4: Six Step Classification

Step	Comments	Rationale
1. Is it special waste?	No	No ACM, or coal tar, clinical or related waste, or waste tyres were observed in the other boreholes, and asbestos was not detected by the analytical laboratory.

Step	Comments	Rationale
2. Is it liquid waste?	No	Materials composed of a soil matrix.
3. Is the waste "pre-classified"?	No	Filling and natural material did not fall into one of the pre-classified categories
4. Does the Waste have hazardous waste characteristics	No	Waste not observed to / or considered at risk to contain explosives, gases, flammable solids, oxidising agents, organic peroxides, toxic substances or corrosive substances, substances liable to spontaneous combustion.
5. Chemical Assessment	Conducted	Refer to Table F2 in Appendix F.
6. Is the Waste Putrescible?	No	All observed components of filling composed of materials pre-classified as non-putrescible (i.e., soil).

As shown in Table F2 (Appendix F) all contaminant concentrations for the analysed fill samples were within the contaminant thresholds (CT1s) for general solid waste (GSW). Therefore, the *in situ* fill in the investigated area is preliminary classified as GSW (non-putrescible).

It is noted that further *in situ* or *ex situ* investigation including visual and analytical processes are required to confirm the preliminary waste classification prior to offsite disposal.

11.2.2 Natural

The following Table 5 presents the results of the assessment of natural soils and bedrock at the site with reference to the VENM definition in the POEO Act and the EPA[2] website.

Table 5: VENM Classification Procedure

Item	Comments	Rationale
1. Is the material natural?	Yes	Natural soil and rock logged in the boreholes and test pits. These materials underlie the fill at the site.
2. Are manufactured chemicals or process residues present?	No	There were no visual or olfactory indicators of chemical contamination of the materials in the test pits. Concentrations of contaminants were considered to be typical of background concentrations (Table F2).
3. Are sulfidic ores or soils present?	No	Refer to Section 5.
4. Are there current or previous land uses that have (or may have) contaminated the materials?	No	Previous land uses may have impacted on surface soils overlying the materials. Low chemical concentrations indicate no likely impact on the natural materials.

Based on the outcome presented in Table 4, natural soils and bedrock within the site are preliminarily classified as VENM.

[2] https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/virgin-excavated-natural-material

11.3 Data Quality Assurance and Quality Control

The data quality assurance and quality control (QA / QC) results are included in Appendix I. Based on the results of the field QA and field and laboratory QC, and evaluation against the data quality indicators (DQI) it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment.

12. Conclusions and Recommendations

The DSI comprised a review of a previous PSI report, and intrusive soil investigation to assess the suitability of the site for the proposed primary school development and whether further investigation and / or management of contamination is required.

All analysed contaminant concentrations for all soil samples tested were within the adopted SAC. Asbestos was not detected within the soil samples analysed.

The fill soils in the areas of proposed works are preliminary classified as GSW (non-putrescible) with reference to NSW EPA (2014), whilst the natural soils are preliminary classified as VENM.

Based on the results of the DSI it is considered that the site is suitable for the proposed primary school development subject to implementation of the following recommendations:

- An unexpected finds protocol (UFP) should be prepared and implemented during site works to address any potentially impacted fill (including asbestos contamination); and
- Additional assessment as required to provide a final waste classification for surplus soils requiring off-site disposal.

13. Mitigation Measures

The mitigation measures for the REF deliverables for the proposed development at the site relevant to this report, as discussed in the Section 12, are summarised in Table 6.

Table 6: Summary of Mitigation Measures

Project Stage Design (D) Construction (C) Operation (O)	Mitigation Measures	Relevant Section of Report
C	An unexpected finds protocol (UFP) should be prepared and implemented during site works to address any potentially impacted fill (including asbestos contamination)	Section 12
C	Additional assessment as required to provide a final waste classification for surplus soils requiring off-site disposal	Section 12

14. References

CRC CARE. (2017). *Risk-based Management and Remediation Guidance for Benzo(a)pyrene.* Technical Report no. 39: Cooperative Research Centre for Contamination Assessment and Remediation of the Environment.

DP. (2024a). *Report on Preliminary Site Investigation (Contamination), Box Hill (The Gables) New Public School Lot 301, Fontana Drive, Box Hill.* Ref: 216255.01, Dated: September 2022.

DP. (2024b). *Advice on Remediation Action Plan Requirement, The Gables New Primary School, Fontana Drive, Gables.* reference: 216255.01.R.003.Rev1: Douglas Partners Pty Ltd.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

NSW EPA. (2020). *Guidelines for Consultants Reporting on Contaminated Land.* Contaminated Land Guidelines: NSW Environment Protection Authority.

NSW EPA. (2022). *Contaminated Sites, Sampling Design Guidelines.* NSW Environment Protection Authority.

15. Limitations

Douglas Partners (DP) has prepared this report for this project at The Gables Public School, Sydney in accordance with DP's proposal dated 24/06/2022 and acceptance received from SINSW. The work was carried out under contract SINSW0310-22. This report is provided for the exclusive use of School Infrastructure NSW for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after DP's field testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the environmental components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in

design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

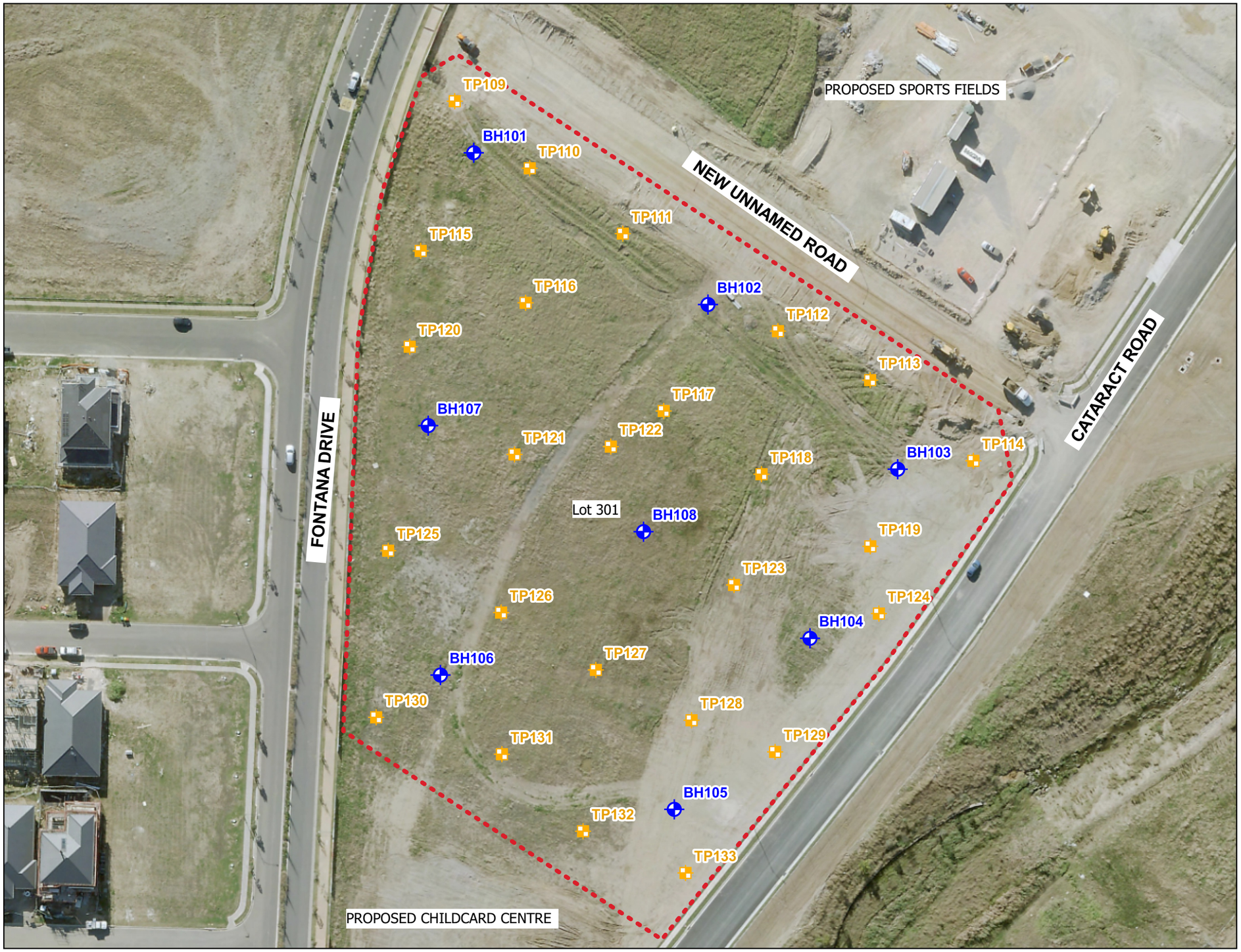
Asbestos has not been detected by observation or by laboratory analysis, either on the surface of the site, or in fill materials at the test locations sampled and analysed.

Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been sampled and analysed. This is either due to undetected variations in ground conditions, or to parts of the site being inaccessible and not available for inspection/sampling, or to vegetation preventing visual inspection and reasonable access. It is therefore considered possible that HBM, including asbestos, may be present in unobserved or untested parts of the site, between and beyond sampling locations, and hence no warranty can be given that asbestos is not present.

Douglas Partners Pty Ltd

Appendix A

Drawings



NOTE:
1. Drawing adapted from aerial imagery from MetroMap (Dated 06.06.2022)
2. Test locations captured using DGPS, accurate to within approx. 100mm

0 10 20 30 40 50 60 m

1:1000 @ A3

LEGEND

- Approximate Site Boundary
- Borehole Location
- Test Pit Location

Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT:	School Infrastructure NSW		
OFFICE:	Sydney	DRAWN BY:	JV/MG
SCALE:	1:1000 @ A3	DATE:	24.08.2022

TITLE: **Test Location Plan**
Geotechnical Investigation
Gables New Primary School

PROJECT No:	216255.01
DRAWING No:	1
REVISION:	0

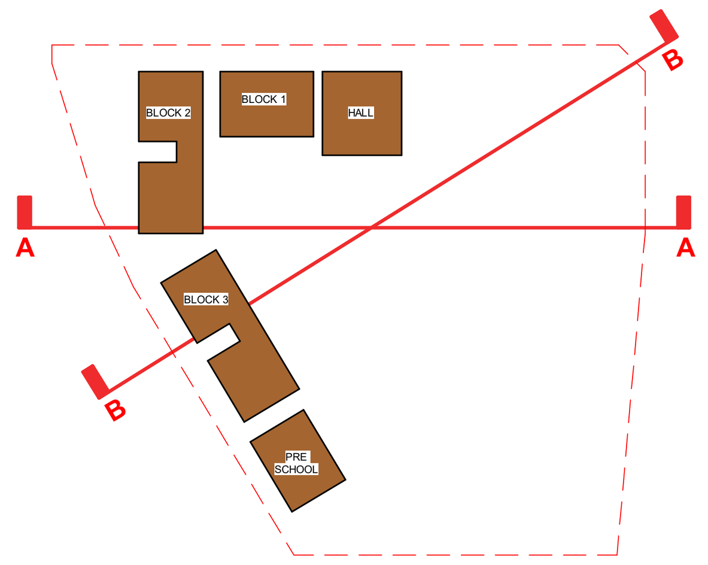
PRELIMINARY

Nominated Architect
Ray Brown, NSWARB 6359

0 4 8 12 20 m

Do not scale drawings. Verify all dimensions on site

revision	purpose of issue	checked	date



ROOM DEPARTMENT LEGEND:

- SCHOOL HALL + CANTEEN AREAS
- ADMINISTRATION + STAFF AREAS
- LIBRARY AREAS
- GENERAL LEARNING SPACES (GLS)
- SUPPORT LEARNING UNIT SPACES (SLU)
- PRESCHOOL SPACES
- SERVICES
- STAFF AMENITIES
- STUDENT AMENITIES

NOTES:

- REFER TO GENERAL NOTES
- REFER TO INTERIOR FINISHES T-SCHEDULE AND SCHEMATIC DESIGN REPORT
- LANDSCAPING AS PER PROPOSED LANDSCAPE PLANS
- REFER TO CIVIL ENGINEERS DOCUMENTATION

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approved	AC
scale	1:400 @A1
prepared	EL
project no	210463.01

project
SINSW Gables New Primary School
Lot 301 - Fontana Drive, The Gables (Box Hill North)

drawing
OVERALL GROUND LEVEL PLAN

drawing no. AR-SD2000
revision

6/09/2024 6:40:50 PM

Appendix B

About this Report

About this Report

Douglas Partners

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

Appendix C

Data Quality Objectives

Appendix C
Data Quality Objectives
The Gables Public School, Sydney

C1.0 Data Quality Objectives

The DSI has been devised broadly in accordance with the seven-step data quality objective (DQO) process which is provided in Appendix B, Schedule B2 of NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).

Step	Summary
1: State the problem	The objective of the investigation is to assess the contamination status of the site with respect to the proposed land use. The report is being undertaken as the land is to be redeveloped. The requirements of the regulator, The Hills Shire Council, will also be considered by consulting their Development Control Plan (DCP), Local Environment Plan (LEP) and any other requirements based on our recent experience with Council on similar sites. A preliminary conceptual site model (CSM) has been prepared (Section 7) for the proposed development. The project team consisted of experienced environmental engineers and scientists working in the roles of Project Principal, Project Reviewer, Project Manager, field staff.
2: Identify the decisions / goal of the study	The site history has identified possible contaminating previous uses which are identified in the CSM (Section 7). The CSM identifies the associated contaminants of potential concern (COPC) and the likely impacted media. The site assessment criteria (SAC) for each of the COPC are detailed in Appendix E. The decision is to establish whether or not the results fall below the SAC. On this basis, an assessment of the site's suitability from a contamination perspective will be derived and a decision made on whether (or not) further assessment and / or remediation will be required.
3: Identify the information inputs	Inputs to the investigation will be the results of analysis of samples to measure the concentrations of COPC identified in the CSM (Section 7) at the site using NATA accredited laboratories and methods, where possible. The SAC for each of the COPC are detailed in Appendix E.
4: Define the study boundaries	The lateral boundaries of the investigation area are shown on Drawing 1, Appendix A. The vertical boundaries are to the extent of contamination impact as determined from the site history assessment and site observations. The assessment is limited to the timeframe over which the field investigation was undertaken. Constraints to the assessment are identified and discussed in the conclusions of the report, Section 12.
5: Develop the analytical approach (or decision rule)	The decision rule is to compare all analytical results with SAC (Appendix E, based on NEPC (2013)). Where guideline values are absent, other sources of guideline values accepted by NEPC (2013) shall be adopted where possible.

Step	Summary
	Where a sample result exceeds the adopted criterion, a further site-specific assessment will be made as to the risk posed by the presence of that contaminant(s). Initial comparisons will be with individual results then, where required, summary statistics (including mean, standard deviation and 95% upper confidence limit (UCL) of the arithmetic mean (95% UCL)) to assess potential risks posed by the site contamination. Quality control results are to be assessed according to their relative percent difference (RPD) values. For field duplicates, triplicates and laboratory results, RPDs should generally be below 30%; for field blanks and rinsates, results should be at or less than the limits of reporting (NEPC, 2013). The field and laboratory quality assurance assessment is included in Appendix I.
6: Specify the performance or acceptance criteria	Baseline condition: Contaminants at the site exceed human health and environmental SAC and pose a potentially unacceptable risk to receptors (null hypothesis). Alternative condition: Contaminants at the site comply with human health and environmental SAC and as such, do not pose a potentially unacceptable risk to receptors (alternative hypothesis). Unless conclusive information from the collected data is sufficient to reject the null hypothesis, it is assumed that the baseline condition is true.
7: Optimise the design for obtaining data	As the purpose of the sampling program is to assess for potential contamination across the site, the sampling program is reliant on professional judgement to identify and sample the potentially affected areas. Further details regarding the proposed sampling plan are presented in Section 8.

C2.0 References

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

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Appendix D

Field Work Methodology

Appendix D
Field Work Methodology
The Gables Public School, Sydney

D1.0 Guidelines

The following key guidelines were consulted for the field work methodology:

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).

D2.0 Soil Sampling

Soil sampling is carried out in accordance with DP standard operating procedures. The general sampling and sample management procedures comprise:

- Collect soil samples directly from the excavator bucket at the nominated sample depth for test pits and from solid flight auger for boreholes;
- Transfer samples in laboratory-prepared glass jars with Teflon lined lids by hand, capping immediately and minimising headspace within the sample jar;
- Transfer samples in laboratory-prepared container by hand, capping immediately and minimising headspace within the sample jar;
- Collect ~40 g to 50 g samples in zip-lock bags for asbestos (presence / absence) analysis;
- Wear a new disposable nitrile glove for each sample point thereby minimising potential for cross-contamination;
- Collect 10% replicate samples for QC purposes;
- Label sample containers with individual and unique identification details, including project number, sample location and sample depth (where applicable);
- Place samples into a cooled, insulated and sealed container for transport to the laboratory; and
- Use chain of custody documentation.

Reference was made to HEPA (2020) for requirements specific to PFAS.

D3.0 References

HEPA. (2020). *PFAS National Environmental Management Plan (NEMP).* Version 2.0: Heads of EPAs Australia and New Zealand and Australian Government Department of the Environment.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

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Appendix E

Site Assessment Criteria

Appendix E
Site Assessment Criteria
The Gables Public School, Sydney

E1.0 Introduction

E1.1 Guidelines

The following key guidelines were consulted for deriving the site assessment criteria (SAC):

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).
- CRC CARE *Health screening levels for petroleum hydrocarbons in soil and groundwater* (CRC CARE, 2011).

E1.2 General

The SAC applied in the current investigation are informed by the CSM which identified human and environmental receptors to potential contamination at the site. Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013).

The following inputs are relevant to the selection and/or derivation of the SAC:

- Land use: public school.
  - Corresponding to land use category '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.
- Soil type: sand

E2.0 Soils

E2.1 Health Investigation and Screening Levels

The generic health investigation levels (HIL) and health screening levels (HSL) are considered to be appropriate for the assessment of human health risk via all relevant pathways of exposure associated with contamination at the site. The adopted soil HIL and HSL for the contaminants of concern are in Table 1 and Table 2.

Table 1: Health Investigation Levels (mg/kg)

Contaminant	HIL-A
Metals	
Arsenic	100
Cadmium	20
Chromium (VI)	100
Copper	6000
Lead	300
Mercury (inorganic)	40
Nickel	400
Zinc	7400
PAH	
B(a)P TEQ	3
Total PAH	300
Phenols	
Phenol	3000
Pentachlorophenol	100
OCP	
DDT+DDE+DDD	240
Aldrin and dieldrin	6
Chlordane	50
Endosulfan	270
Endrin	10
Heptachlor	6
HCB	10
Methoxychlor	300
OPP	
Chlorpyrifos	160
PCB	
PCB	1
Herbicides	
2,4,5-T	600
2,4-D	900

Contaminant	HIL-A
MCPA	600
MCPB	600
Picloram	4500
Other Pesticides	
Atrazine	320

Table 2: Health Screening Levels (mg/kg)

Contaminant	HSL-A&B	HSL-A&B	HSL-A&B	HSL-A&B
SAND	**0 m to <1 m**	**1 m to <2 m**	**2 m to <4 m**	**4 m+**
Benzene	0.5	0.5	0.5	0.5
Toluene	160	220	310	540
Ethylbenzene	55	NL	NL	NL
Xylenes	40	60	95	170
Naphthalene	3	NL	NL	NL
TRH F1	45	70	110	200
TRH F2	110	240	440	NL

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX

TRH F2 is TRH >C_{10}-C_{16} minus naphthalene

The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would results in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'

The HSL for direct contact derived from CRC CARE (2011) are in Table 3.

Table 3: Health Screening Levels for Direct Contact (mg/kg)

Contaminant	DC HSL-A	DC HSL-IMW
Benzene	100	1100
Toluene	14 000	120 000
Ethylbenzene	4500	85 000
Xylenes	12 000	130 000
Naphthalene	1400	29 000
TRH F1	4400	82 000

Contaminant	DC HSL-A	DC HSL-IMW
TRH F2	3300	62 000
TRH F3	4500	85 000
TRH F4	6300	120 000

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} minus naphthalene
IMW intrusive maintenance worker

E2.2 Asbestos in Soil

Based on the CSM and/or current site access limitations, a detailed asbestos assessment was not considered to be warranted at this stage. However, due to the history of widespread use of ACM products across Australia, ACM can be encountered unexpectedly and sporadically at a site. Therefore, the presence or absence of asbestos at a limit of reporting of 0.1 g/kg (AS:4964) has been adopted for this investigation / assessment as an initial screen.

E2.3 Ecological Investigation Levels

Ecological investigation levels (EIL) and added contaminant limits (ACL), where appropriate, have been derived in NEPC (2013) for arsenic, copper, chromium (III), nickel, lead, zinc, DDT and naphthalene. The adopted EIL derived using the interactive (excel) calculation spreadsheet on the NEPM toolbox website are shown in Table 5, with inputs into their derivation shown in Table 4.

Table 4: Inputs to the Derivation of the Ecological Investigation Levels

Variable	Input	Rationale
Age of contaminants	“Aged” (>2 years)	No recent signs of contamination
pH	7.43	Measured average based on laboratory results
CEC	12.2 $cmol_c/kg$	Measured average based on laboratory results
Clay content	10 %	Assumed minimum based on lithology encountered during investigation
Traffic volumes	high	
State / Territory	NSW	

Table 5: Ecological Investigation Levels (mg/kg)

Contaminant	EIL-A-B-C
Metals	
Arsenic	100
Copper	230
Nickel	200
Chromium III	410
Lead	1100
Zinc	590
PAH	
Naphthalene	170
OCP	
DDT	180

Notes: EIL-A-B-C urban residential and public open space

E2.4 Ecological Screening Levels

Ecological screening levels (ESL) are used to assess the risk of selected petroleum hydrocarbon compounds, BTEX and benzo(a)pyrene to terrestrial ecosystems. The adopted ESL are shown in Table 6.

Table 6: Ecological Screening Levels (mg/kg)

Contaminant	Soil Type	ESL-A-B-C
Benzene	Coarse	50
Toluene	Coarse	85
Ethylbenzene	Coarse	70
Xylenes	Coarse	105
TRH F1	Coarse/ Fine	180*
TRH F2	Coarse/ Fine	120*
TRH F3	Coarse	300
TRH F4	Coarse	2800
B(a)P	Coarse	0.7

Notes: ESL are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability
TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} including naphthalene

E2.5 Management Limits

In addition to appropriate consideration and application of the HSL and ESL, there are additional considerations which reflect the nature and properties of petroleum hydrocarbons, including:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- Fire and explosion hazards; and
- Effects on buried infrastructure e.g., penetration of, or damage to, in-ground services.

The adopted management limits are in Table 7.

Table 7: Management Limits (mg/kg)

Contaminant	Soil Type	ML-A-B-C
TRH F1	Coarse	700
TRH F2	Coarse	1000
TRH F3	Coarse	2500
TRH F4	Coarse	10 000
TRH F1	Fine	800
TRH F2	Fine	1000
TRH F3	Fine	3500
TRH F4	Fine	10 000

Notes: TRH F1 is TRH C_6-C_{10} including BTEX
TRH F2 is TRH >C_{10}-C_{16} including naphthalene
ML-A-B-C residential, parkland and public open space

E3.0 References

CRC CARE. (2011). *Health screening levels for petroleum hydrocarbons in soil and groundwater.* Parts 1 to 3, Technical Report No. 10: Cooperative Research Centre for Contamination Assessment and Remediation of the Environment.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

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Appendix F

Summary Tables

Douglas Partners
Geotechnics / Environment / Groundwater

Table F1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

				Metals								TRH						BTEX		
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene
			PQL	4	0.4	1	1	1	0.1	1	1	25	50	25	50	100	100	0.2	0.5	1
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0.1 - 0.2 m	Fill	8/08/2022	**8**	<0.4	**16**	**20**	**19**	<0.1	**9**	**41**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
BH101	1.9 - 2 m	Fill	8/08/2022	**5**	<0.4	**21**	**8**	**11**	<0.1	**4**	**16**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	70 180	240 -	- 300	- 2800	0.5 50	220 85	NL 70
BH102	0.1 - 0.2 m	Fill	10/08/2022	**9**	<0.4	**15**	**14**	**15**	<0.1	**6**	**27**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
BH102	6.9 - 7 m	Fill	10/08/2022	**6**	<0.4	**17**	**16**	**14**	<0.1	**8**	**32**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	200 180	NL -	- 300	- 2800	0.5 50	540 85	NL 70
BH103	1.9 - 2 m	Fill	10/08/2022	**4**	<0.4	**15**	**6**	**11**	<0.1	**4**	**22**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	70 180	240 -	- 300	- 2800	0.5 50	220 85	NL 70
BH104	0.4 - 0.5 m	Fill	9/08/2022	**5**	<0.4	**12**	**22**	**16**	<0.1	**10**	**36**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
BH104	2.7 - 3 m	Natural	9/08/2022	**8**	<0.4	**21**	**9**	**15**	<0.1	**6**	**16**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	110 180	440 -	- 300	- 2800	0.5 50	310 85	NL 70
BH105	0.1 - 0.2 m	Fill	9/08/2022	**7**	<0.4	**12**	**11**	**26**	<0.1	**6**	**26**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
BH106	0.4 - 0.5 m	Fill	9/08/2022	**6**	<0.4	**12**	**11**	**13**	<0.1	**4**	**18**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
BH107	0.1 - 0.2 m	Fill	8/08/2022	**7**	<0.4	**14**	**14**	**14**	<0.1	**7**	**31**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
BD108082022	0.1 - 0.2 m	Fill	8/08/2022	**9**	<0.4	**18**	**19**	**18**	<0.1	**8**	**37**	-	-	-	-	-	-	-	-	-
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
BH108	3.9 - 4 m	Fill	9/08/2022	**9**	<0.4	**26**	**15**	**17**	<0.1	**9**	**27**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	110 180	440 -	- 300	- 2800	0.5 50	310 85	NL 70
TP109	0.1 - 0.2 m	Fill	11/08/2022	**8**	<0.4	**15**	**20**	**17**	<0.1	**10**	**41**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP110	2 - 2.1 m	Fill	11/08/2022	<4	<0.4	**6**	**6**	**8**	<0.1	**2**	**10**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	110 180	440 -	- 300	- 2800	0.5 50	310 85	NL 70
TP111	0.1 - 0.2 m	Fill	11/08/2022	**6**	<0.4	**15**	**17**	**16**	<0.1	**8**	**33**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP112	1.5 - 1.6 m	Fill	11/08/2022	**8**	<0.4	**13**	**11**	**13**	<0.1	**8**	**25**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	70 180	240 -	- 300	- 2800	0.5 50	220 85	NL 70
TP113	0.1 - 0.2 m	Fill	11/08/2022	**6**	<0.4	**15**	**7**	**12**	<0.1	**4**	**16**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP114	0.5 - 0.6 m	Fill	10/08/2022	**11**	<0.4	**10**	**11**	**18**	<0.1	**7**	**23**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP115	0.5 - 0.6 m	Fill	11/08/2022	<4	<0.4	**5**	**6**	**6**	<0.1	**4**	**14**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP116	0.1 - 0.2 m	Fill	11/08/2022	**9**	<0.4	**20**	**20**	**18**	<0.1	**10**	**48**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP116	3 - 3.1 m	Fill	11/08/2022	**8**	<0.4	**17**	**15**	**16**	<0.1	**6**	**26**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	110 180	440 -	- 300	- 2800	0.5 50	310 85	NL 70
TP117	0.1 - 0.2 m	Fill	11/08/2022	**7**	<0.4	**16**	**14**	**18**	<0.1	**7**	**30**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
BD06	0.1 - 0.2 m	Fill	11/08/2022	**7**	<0.4	**14**	**15**	**16**	<0.1	**7**	**32**	-	-	-	-	-	-	-	-	-
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP118	1 - 1.1 m	Fill	11/08/2022	**4**	<0.4	**8**	**8**	**9**	<0.1	**3**	**12**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	70 180	240 -	- 300	- 2800	0.5 50	220 85	NL 70
TP119	0.1 - 0.2 m	Fill	10/08/2022	**10**	<0.4	**16**	**20**	**40**	<0.1	**10**	**42**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP119	2.7 - 2.8 m	Natural	10/08/2022	**4**	<0.4	**16**	**10**	**17**	<0.1	**5**	**20**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	110 180	440 -	- 300	- 2800	0.5 50	310 85	NL 70
TP120	0.1 - 0.2 m	Fill	11/08/2022	**8**	<0.4	**18**	**16**	**17**	<0.1	**7**	**36**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP120	1.5 - 1.6 m	Fill	11/08/2022	<4	<0.4	**3**	<1	**5**	<0.1	<1	**3**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	70 180	240 -	- 300	- 2800	0.5 50	220 85	NL 70
TP121	0.1 - 0.2 m	Fill	11/08/2022	**7**	<0.4	**18**	**20**	**18**	<0.1	**8**	**40**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
BD07-1	0 m	Fill	11/08/2022	**10**	<1	**20**	**31**	**21**	<0.1	**8**	**52**	<10	<50	<10	<50	<100	<100	<0.2	<0.5	<0.5
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
BD07	0.1 - 0.2 m	Fill	11/08/2022	**7**	<0.4	**17**	**19**	**16**	<0.1	**8**	**39**	-	-	-	-	-	-	-	-	-
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP122	1 - 1.1 m	Fill	11/08/2022	**5**	<0.4	**10**	**13**	**12**	<0.1	**6**	**19**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	70 180	240 -	- 300	- 2800	0.5 50	220 85	NL 70

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Table F1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

				Metals								TRH						BTEX		
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene
			PQL	4	0.4	1	1	1	0.1	1	1	25	50	25	50	100	100	0.2	0.5	1
TP123	1 - 1.1 m	Fill	11/08/2022	**5**	<0.4	**12**	**6**	**11**	<0.1	**4**	**14**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	70 180	240 -	- 300	- 2800	0.5 50	220 85	NL 70
TP124	0.1 - 0.2 m	Fill	10/08/2022	**7**	<0.4	**15**	**15**	**17**	<0.1	**8**	**33**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP125	1.5 - 1.6 m	Fill	10/08/2022	<4	<0.4	**8**	**4**	**10**	<0.1	**3**	**11**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	70 180	240 -	- 300	- 2800	0.5 50	220 85	NL 70
TP126	0.1 - 0.2 m	Fill	10/08/2022	**7**	<0.4	**18**	**22**	**17**	<0.1	**7**	**41**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP127	0.5 - 0.6 m	Fill	10/08/2022	**6**	<0.4	**12**	**14**	**13**	<0.1	**6**	**29**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP128	0.1 - 0.2 m	Fill	10/08/2022	**6**	<0.4	**12**	**14**	**13**	<0.1	**6**	**29**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP129	1 - 1.1 m	Fill	10/08/2022	**5**	<0.4	**11**	**18**	**14**	<0.1	**8**	**35**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	70 180	240 -	- 300	- 2800	0.5 50	220 85	NL 70
BD04	1 - 1.1 m	Fill	10/08/2022	<4	<0.4	**10**	**7**	**10**	<0.1	**4**	**16**	-	-	-	-	-	-	-	-	-
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	70 180	240 -	- 300	- 2800	0.5 50	220 85	NL 70
TP130	0.5 - 0.6 m	Fill	10/08/2022	**7**	<0.4	**5**	**2**	**7**	<0.1	**1**	**5**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP131	0.1 - 0.2 m	Fill	10/08/2022	**7**	<0.4	**17**	**20**	**17**	<0.1	**8**	**38**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70
TP131	3 - 3.1 m	Fill	10/08/2022	<4	<0.4	**8**	**10**	**10**	<0.1	**3**	**12**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	110 180	440 -	- 300	- 2800	0.5 50	310 85	NL 70
TP132	2 - 2.1 m	Fill	10/08/2022	**5**	<0.4	**10**	**11**	**11**	<0.1	**5**	**16**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	110 180	440 -	- 300	- 2800	0.5 50	310 85	NL 70
TP133	0.1 - 0.2 m	Fill	10/08/2022	**7**	<0.4	**13**	**16**	**14**	<0.1	**9**	**37**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1
				100 100	20 -	100 410	6000 230	300 1100	40 -	400 200	7400 590	- -	- 120	45 180	110 -	- 300	- 2800	0.5 50	160 85	55 70

Lab result

HIL/HSL value EIL/ESL value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report **Blue** = DC exceedance HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Non limiting AD = Asbestos detected NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level ML = Management Limit DC = Direct Contact HSL

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Reported naphthalene laboratory result obtained from BTEXN suite

c Criteria applies to DDT only

Site Assessment Criteria (SAC):

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

SAC based on generic land use thresholds for Residential A with garden/accessible soil

HIL A	Residential / Low - High Density (NEPC, 2013)
HSL A/B	Residential / Low - High Density (vapour intrusion) (NEPC, 2013)
DC HSL A	Direct contact HSL A Residential (Low density) (direct contact) (CRC CARE, 2011)
EIL/ESL UR/POS	Urban Residential and Public Open Space (NEPC, 2013)
ML R/P/POS	Residential, Parkland and Public Open Space (NEPC, 2013)

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Table F1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

					PAH				Phenol	OCP												
				Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs	Phenol	DDD	DDT+DDE+DDD [c]	DDE	DDT	Aldrin & Dieldrin	Endosulfan I	Total Chlordane	Endosulfan II	Endosulfan Sulphate	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene
			PQL	1	0.1	0.05	0.5	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0.1 - 0.2 m	Fill	8/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BH101	1.9 - 2 m	Fill	8/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				60 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BH102	0.1 - 0.2 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BH102	6.9 - 7 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				170 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BH103	1.9 - 2 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				60 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BH104	0.4 - 0.5 m	Fill	9/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BH104	2.7 - 3 m	Natural	9/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				95 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BH105	0.1 - 0.2 m	Fill	9/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BH106	0.4 - 0.5 m	Fill	9/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BH107	0.1 - 0.2 m	Fill	8/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BD108082022	0.1 - 0.2 m	Fill	8/08/2022	-	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BH108	3.9 - 4 m	Fill	9/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				95 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP109	0.1 - 0.2 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP110	2 - 2.1 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				95 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP111	0.1 - 0.2 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP112	1.5 - 1.6 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				60 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP113	0.1 - 0.2 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP114	0.5 - 0.6 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP115	0.5 - 0.6 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP116	0.1 - 0.2 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP116	3 - 3.1 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				95 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP117	0.1 - 0.2 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BD06	0.1 - 0.2 m	Fill	11/08/2022	-	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP118	1 - 1.1 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				60 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP119	0.1 - 0.2 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP119	2.7 - 2.8 m	Natural	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				95 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP120	0.1 - 0.2 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP120	1.5 - 1.6 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				60 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP121	0.1 - 0.2 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BD07-1	0 m	Fill	11/08/2022	<0.5	<0.5	<0.5	<0.5	-	<1	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BD07	0.1 - 0.2 m	Fill	11/08/2022	-	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP122	1 - 1.1 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				60 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -

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Table F1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

					PAH				Phenol	OCP												
				Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs	Phenol	DDD	DDT+DDE+DDD [c]	DDE	DDT	Aldrin & Dieldrin	Endosulfan I	Total Chlordane	Endosulfan II	Endosulfan Sulphate	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene
			PQL	1	0.1	0.05	0.5	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1
TP123	1 - 1.1 m	Fill	11/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				60 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP124	0.1 - 0.2 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP125	1.5 - 1.6 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				60 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP126	0.1 - 0.2 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP127	0.5 - 0.6 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP128	0.1 - 0.2 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP129	1 - 1.1 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				60 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
BD04	1 - 1.1 m	Fill	10/08/2022	-	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				60 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP130	0.5 - 0.6 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP131	0.1 - 0.2 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP131	3 - 3.1 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
				95 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP132	2 - 2.1 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				95 105	NL 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -
TP133	0.1 - 0.2 m	Fill	10/08/2022	<1	<0.1	<0.05	<0.5	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				40 105	3 170	- 0.7	3 -	300 -	100 -	- -	240 180	- -	- 180	6 -	- -	50 -	- -	- -	10 -	270 -	6 -	10 -

Lab result

HIL/HSL value EIL/ESL value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report **Blue** = DC exceedance HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Non limiting AD = Asbestos detected NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level ML = Management Limit DC = Direct Contact HSL

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Reported naphthalene laboratory result obtained from BTEXN suite

c Criteria applies to DDT only

Site Assessment Criteria (SAC):

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

SAC based on generic land use thresholds for Residential A with garden/accessible soil

HIL A	Residential / Low - High Density (NEPC, 2013)
HSL A/B	Residential / Low - High Density (vapour intrusion) (NEPC, 2013)
DC HSL A	Direct contact HSL A Residential (Low density) (direct contact) (CRC CARE, 2011)
EIL/ESL UR/POS	Urban Residential and Public Open Space (NEPC, 2013)
ML R/P/POS	Residential, Parkland and Public Open Space (NEPC, 2013)

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Table F1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

					OPP	PCB								Herbicides						Asbestos		
				Methoxychlor	Chlorpyriphos	Arochlor 1016	Total PCB	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Aroclor 1260	2,4,5-T	2,4-D	MCPA	MCPB	Picloram	Atrazine	Asbestos ID in soil >0.1g/kg	Trace Analysis	Asbestos (50 g)
			PQL	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			
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-
BH101	0.1 - 0.2 m	Fill	8/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BH101	1.9 - 2 m	Fill	8/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BH102	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BH102	6.9 - 7 m	Fill	10/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BH103	1.9 - 2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BH104	0.4 - 0.5 m	Fill	9/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BH104	2.7 - 3 m	Natural	9/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BH105	0.1 - 0.2 m	Fill	9/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BH106	0.4 - 0.5 m	Fill	9/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BH107	0.1 - 0.2 m	Fill	8/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BD108082022	0.1 - 0.2 m	Fill	8/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BH108	3.9 - 4 m	Fill	9/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP109	0.1 - 0.2 m	Fill	11/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP110	2 - 2.1 m	Fill	11/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP111	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP112	1.5 - 1.6 m	Fill	11/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP113	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP114	0.5 - 0.6 m	Fill	10/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP115	0.5 - 0.6 m	Fill	11/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP116	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP116	3 - 3.1 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP117	0.1 - 0.2 m	Fill	11/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BD06	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP118	1 - 1.1 m	Fill	11/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP119	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP119	2.7 - 2.8 m	Natural	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP120	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP120	1.5 - 1.6 m	Fill	11/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP121	0.1 - 0.2 m	Fill	11/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BD07-1	0 m	Fill	11/08/2022	<0.2	<0.05	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
BD07	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			
TP122	1 - 1.1 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300	160	-	1	-	-	-	-	-	-	600	900	600	600	4500	320			

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Table F1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

					OPP	PCB								Herbicides						Asbestos		
				Methoxychlor	Chlorpyriphos	Arochlor 1016	Total PCB	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Aroclor 1260	2,4,5-T	2,4-D	MCPA	MCPB	Picloram	Atrazine	Asbestos ID in soil >0.1g/kg	Trace Analysis	Asbestos (50 g)
			PQL	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			
TP123	1 - 1.1 m	Fill	11/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP124	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP125	1.5 - 1.6 m	Fill	10/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP126	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP127	0.5 - 0.6 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP128	0.1 - 0.2 m	Fill	10/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP129	1 - 1.1 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
BD04	1 - 1.1 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP130	0.5 - 0.6 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP131	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP131	3 - 3.1 m	Fill	10/08/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP132	2 - 2.1 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			
TP133	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NAD	NAD	NAD
				300 -	160 -	- -	1 -	- -	- -	- -	- -	- -	- -	600 -	900 -	600 -	600 -	4500 -	320 -			

Lab result

HIL/HSL value EIL/ESL value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report **Blue** = DC exceedance HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Non limiting AD = Asbestos detected NAD = No Asbestos detected

HIL = Health investigation level HSL = Health screening level (excluding DC) EIL = Ecological investigation level ESL = Ecological screening level ML = Management Limit DC = Direct Contact HSL

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Reported naphthalene laboratory result obtained from BTEXN suite

c Criteria applies to DDT only

Site Assessment Criteria (SAC):

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

SAC based on generic land use thresholds for Residential A with garden/accessible soil

HIL A	Residential / Low - High Density (NEPC, 2013)
HSL A/B	Residential / Low - High Density (vapour intrusion) (NEPC, 2013)
DC HSL A	Direct contact HSL A Residential (Low density) (direct contact) (CRC CARE, 2011)
EIL/ESL UR/POS	Urban Residential and Public Open Space (NEPC, 2013)
ML R/P/POS	Residential, Parkland and Public Open Space (NEPC, 2013)

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Table F2: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos, Additional PCB, Additional chemicals

				Metals								TRH					BTEX					
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C9	TRH C10 - C14	TRH C15 - C28	TRH C29 - C36	C10-C36 recoverable hydrocarbons	Benzene	Toluene	Ethylbenzene	m+p-Xylene	o-Xylene	Xylenes (total)
			PQL	4	0.4	1	1	1	0.1	1	1	25	50	100	100	50	0.2	0.5	1	2	1	1
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0.1 - 0.2 m	Fill	8/08/2022	**8**	<0.4	**16**	**20**	**19**	<0.1	**9**	**41**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BH101	1.9 - 2 m	Fill	8/08/2022	**5**	<0.4	**21**	**8**	**11**	<0.1	**4**	**16**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BH102	0.1 - 0.2 m	Fill	10/08/2022	**9**	<0.4	**15**	**14**	**15**	<0.1	**6**	**27**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BH102	6.9 - 7 m	Fill	10/08/2022	**6**	<0.4	**17**	**16**	**14**	<0.1	**8**	**32**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BH103	1.9 - 2 m	Fill	10/08/2022	**4**	<0.4	**15**	**6**	**11**	<0.1	**4**	**22**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BH104	0.4 - 0.5 m	Fill	9/08/2022	**5**	<0.4	**12**	**22**	**16**	<0.1	**10**	**36**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BH104	2.7 - 3 m	Natural	9/08/2022	**8**	<0.4	**21**	**9**	**15**	<0.1	**6**	**16**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BH105	0.1 - 0.2 m	Fill	9/08/2022	**7**	<0.4	**12**	**11**	**26**	<0.1	**6**	**26**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BH106	0.4 - 0.5 m	Fill	9/08/2022	**6**	<0.4	**12**	**11**	**13**	<0.1	**4**	**18**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BH107	0.1 - 0.2 m	Fill	8/08/2022	**7**	<0.4	**14**	**14**	**14**	<0.1	**7**	**31**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BD108082022	0.1 - 0.2 m	Fill	8/08/2022	**9**	<0.4	**18**	**19**	**18**	<0.1	**8**	**37**	-	-	-	-	-	-	-	-	-	-	-
BH108	3.9 - 4 m	Fill	9/08/2022	**9**	<0.4	**26**	**15**	**17**	<0.1	**9**	**27**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP109	0.1 - 0.2 m	Fill	11/08/2022	**8**	<0.4	**15**	**20**	**17**	<0.1	**10**	**41**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP110	2 - 2.1 m	Fill	11/08/2022	<4	<0.4	**6**	**6**	**8**	<0.1	**2**	**10**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP111	0.1 - 0.2 m	Fill	11/08/2022	**6**	<0.4	**15**	**17**	**16**	<0.1	**8**	**33**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP112	1.5 - 1.6 m	Fill	11/08/2022	**8**	<0.4	**13**	**11**	**13**	<0.1	**8**	**25**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP113	0.1 - 0.2 m	Fill	11/08/2022	**6**	<0.4	**15**	**7**	**12**	<0.1	**4**	**16**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP114	0.5 - 0.6 m	Fill	10/08/2022	**11**	<0.4	**10**	**11**	**18**	<0.1	**7**	**23**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP115	0.5 - 0.6 m	Fill	11/08/2022	<4	<0.4	**5**	**6**	**6**	<0.1	**4**	**14**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP116	0.1 - 0.2 m	Fill	11/08/2022	**9**	<0.4	**20**	**20**	**18**	<0.1	**10**	**48**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP116	3 - 3.1 m	Fill	11/08/2022	**8**	<0.4	**17**	**15**	**16**	<0.1	**6**	**26**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP117	0.1 - 0.2 m	Fill	11/08/2022	**7**	<0.4	**16**	**14**	**18**	<0.1	**7**	**30**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BD06	0.1 - 0.2 m	Fill	11/08/2022	**7**	<0.4	**14**	**15**	**16**	<0.1	**7**	**32**	-	-	-	-	-	-	-	-	-	-	-
TP118	1 - 1.1 m	Fill	11/08/2022	**4**	<0.4	**8**	**8**	**9**	<0.1	**3**	**12**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP119	0.1 - 0.2 m	Fill	10/08/2022	**10**	<0.4	**16**	**20**	**40**	<0.1	**10**	**42**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP119	2.7 - 2.8 m	Natural	10/08/2022	**4**	<0.4	**16**	**10**	**17**	<0.1	**5**	**20**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP120	0.1 - 0.2 m	Fill	11/08/2022	**8**	<0.4	**18**	**16**	**17**	<0.1	**7**	**36**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP120	1.5 - 1.6 m	Fill	11/08/2022	<4	<0.4	**3**	<1	**5**	<0.1	<1	**3**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP121	0.1 - 0.2 m	Fill	11/08/2022	**7**	<0.4	**18**	**20**	**18**	<0.1	**8**	**40**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BD07-1	0 m	Fill	11/08/2022	**10**	<1	**20**	**31**	**21**	<0.1	**8**	**52**	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
BD07	0.1 - 0.2 m	Fill	11/08/2022	**7**	<0.4	**17**	**19**	**16**	<0.1	**8**	**39**	-	-	-	-	-	-	-	-	-	-	-
TP122	1 - 1.1 m	Fill	11/08/2022	**5**	<0.4	**10**	**13**	**12**	<0.1	**6**	**19**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP123	1 - 1.1 m	Fill	11/08/2022	**5**	<0.4	**12**	**6**	**11**	<0.1	**4**	**14**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP124	0.1 - 0.2 m	Fill	10/08/2022	**7**	<0.4	**15**	**15**	**17**	<0.1	**8**	**33**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP125	1.5 - 1.6 m	Fill	10/08/2022	<4	<0.4	**8**	**4**	**10**	<0.1	**3**	**11**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP126	0.1 - 0.2 m	Fill	10/08/2022	**7**	<0.4	**18**	**22**	**17**	<0.1	**7**	**41**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP127	0.5 - 0.6 m	Fill	10/08/2022	**6**	<0.4	**12**	**14**	**13**	<0.1	**6**	**29**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP128	0.1 - 0.2 m	Fill	10/08/2022	**6**	<0.4	**12**	**14**	**13**	<0.1	**6**	**29**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP129	1 - 1.1 m	Fill	10/08/2022	**5**	<0.4	**11**	**18**	**14**	<0.1	**8**	**35**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
BD04	1 - 1.1 m	Fill	10/08/2022	<4	<0.4	**10**	**7**	**10**	<0.1	**4**	**16**	-	-	-	-	-	-	-	-	-	-	-
TP130	0.5 - 0.6 m	Fill	10/08/2022	**7**	<0.4	**5**	**2**	**7**	<0.1	**1**	**5**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP131	0.1 - 0.2 m	Fill	10/08/2022	**7**	<0.4	**17**	**20**	**17**	<0.1	**8**	**38**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP131	3 - 3.1 m	Fill	10/08/2022	<4	<0.4	**8**	**10**	**10**	<0.1	**3**	**12**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP132	2 - 2.1 m	Fill	10/08/2022	**5**	<0.4	**10**	**11**	**11**	<0.1	**5**	**16**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
TP133	0.1 - 0.2 m	Fill	10/08/2022	**7**	<0.4	**13**	**16**	**14**	<0.1	**9**	**37**	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1

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Table F2: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos, Additional PCB, Additional chemicals

				Metals								TRH					BTEX					
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C9	TRH C10 - C14	TRH C15 - C28	TRH C29 - C36	C10-C36 recoverable hydrocarbons	Benzene	Toluene	Ethylbenzene	m+p-Xylene	o-Xylene	Xylenes (total)
			PQL	4	0.4	1	1	1	0.1	1	1	25	50	100	100	50	0.2	0.5	1	2	1	1
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
CT1				100	20	100	NC	100	4	40	NC	650	NC	NC	NC	10000	10	288	600	NC	NC	1000
SCC1				500	100	1900	NC	1500	50	1050	NC	650	NC	NC	NC	10000	18	518	1080	NC	NC	1800
TCLP1				N/A	N/A	N/A	NC	N/A	N/A	N/A	NC	N/A	NC	NC	NC	N/A	N/A	N/A	N/A	NC	NC	N/A
CT2				400	80	400	NC	400	16	160	NC	2600	NC	NC	NC	40000	40	1152	2400	NC	NC	4000
SCC2				2000	400	7600	NC	6000	200	4200	NC	2600	NC	NC	NC	40000	72	2073	4320	NC	NC	7200
TCLP2				N/A	N/A	N/A	NC	N/A	N/A	N/A	NC	N/A	NC	NC	NC	N/A	N/A	N/A	N/A	NC	NC	N/A
NEPC (1999)				1-50	1	5-1000	2-100	2-200	0.03	5-500	10-300	-	-	-	-	-	-	-	-	-	-	-
ANZECC (1992)				0.2-30	0.04-2	0.5-110	1-190	<2-200	0.001-0.1	2-400	2-180	-	-	-	-	-	0.05 - 1	0.1 - 1	-	-	-	-
ANZECC (2000)				1-53	0.016-0.78	2.5-673	0.4-412	2-81	-	1-517	1-263	-	-	-	-	-	-	-	-	-	-	-

CT1 exceedance TCLP1 and/or SCC1 exceedance CT2 exceedance TCLP2 and/or SCC2 exceedance Asbestos detection

NT = Not tested NL = Non limiting NC = No criteria NA = Not applicable

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Total chromium used as initial screen for chromium(VI).

c Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

f All criteria are in the same units as the reported results

PQL Practical quantitation limit

CT1 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste

SCC1 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

TCLP1 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

CT2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste

SCC2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

TCLP2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

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Table F2: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos, Additional PCB, Additional chemicals

				PAH																	Phenol
				Benzo(a)pyrene (BaP)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(k)fluoranthene	Benzo(b,j+k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Total PAHs	Phenol
			PQL	0.05	0.1	0.1	0.1	0.1	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	5
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0.1 - 0.2 m	Fill	8/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
BH101	1.9 - 2 m	Fill	8/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
BH102	0.1 - 0.2 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
BH102	6.9 - 7 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
BH103	1.9 - 2 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
BH104	0.4 - 0.5 m	Fill	9/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
BH104	2.7 - 3 m	Natural	9/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
BH105	0.1 - 0.2 m	Fill	9/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
BH106	0.4 - 0.5 m	Fill	9/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
BH107	0.1 - 0.2 m	Fill	8/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
BD108082022	0.1 - 0.2 m	Fill	8/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
BH108	3.9 - 4 m	Fill	9/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP109	0.1 - 0.2 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP110	2 - 2.1 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP111	0.1 - 0.2 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP112	1.5 - 1.6 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP113	0.1 - 0.2 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP114	0.5 - 0.6 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP115	0.5 - 0.6 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP116	0.1 - 0.2 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP116	3 - 3.1 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP117	0.1 - 0.2 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
BD06	0.1 - 0.2 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP118	1 - 1.1 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP119	0.1 - 0.2 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP119	2.7 - 2.8 m	Natural	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP120	0.1 - 0.2 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP120	1.5 - 1.6 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP121	0.1 - 0.2 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
BD07-1	0 m	Fill	11/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	<1
BD07	0.1 - 0.2 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP122	1 - 1.1 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP123	1 - 1.1 m	Fill	11/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP124	0.1 - 0.2 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP125	1.5 - 1.6 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP126	0.1 - 0.2 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP127	0.5 - 0.6 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP128	0.1 - 0.2 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP129	1 - 1.1 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
BD04	1 - 1.1 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP130	0.5 - 0.6 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP131	0.1 - 0.2 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP131	3 - 3.1 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<5
TP132	2 - 2.1 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-
TP133	0.1 - 0.2 m	Fill	10/08/2022	<0.05	<0.1	<0.1	<0.1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-

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Table F2: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos, Additional PCB, Additional chemicals

				PAH																	Phenol
				Benzo(a)pyrene (BaP)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(k)fluoranthene	Benzo(b,j+k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Total PAHs	Phenol
			PQL	0.05	0.1	0.1	0.1	0.1	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	5
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Waste Classification Criteria [f]																					
CT1				0.8	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	200	288
SCC1				10	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	200	518
TCLP1				N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	N/A	N/A
CT2				3.2	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	800	1152
SCC2				23	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	800	2073
TCLP2				N/A	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	N/A	N/A
Published Background Concentrations																					
NEPC (1999)				-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZECC (1992)				-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	0.95-5	0.03 – 0.5
ANZECC (2000)				-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CT1 exceedance | TCLP1 and/or SCC1 exceedance | CT2 exceedance | TCLP2 and/or SCC2 exceedance | Asbestos detection

NT = Not tested NL = Non limiting NC = No criteria NA = Not applicable

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Total chromium used as initial screen for chromium(VI).

c Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

f All criteria are in the same units as the reported results

PQL Practical quantitation limit

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SCC1 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

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SCC2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

TCLP2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

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Table F2: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos, Additional PCB, Additional chemicals

				OCP		OPP	PCB								Asbestos			Additional chemicals			
				Total Endosulfan	Total Analysed OCP	Total Analysed OPP	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Aroclor 1260	Total PCB	Asbestos ID in soil >0.1g/kg	Trace Analysis	Total Asbestos	2,4-D [(2,4-Dichlorophenoxy) acetic acid]	Fluroxypyr	Picloram	Triclopyr
			PQL	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				0.5	1	0.5	0.5
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0.1 - 0.2 m	Fill	8/08/2022	-	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
BH101	1.9 - 2 m	Fill	8/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
BH102	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
BH102	6.9 - 7 m	Fill	10/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
BH103	1.9 - 2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
BH104	0.4 - 0.5 m	Fill	9/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
BH104	2.7 - 3 m	Natural	9/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105	0.1 - 0.2 m	Fill	9/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
BH106	0.4 - 0.5 m	Fill	9/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
BH107	0.1 - 0.2 m	Fill	8/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
BD108082022	0.1 - 0.2 m	Fill	8/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH108	3.9 - 4 m	Fill	9/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP109	0.1 - 0.2 m	Fill	11/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	<0.5	<1	<0.5	<0.5
TP110	2 - 2.1 m	Fill	11/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
TP111	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP112	1.5 - 1.6 m	Fill	11/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
TP113	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	<0.5	<1	<0.5	<0.5
TP114	0.5 - 0.6 m	Fill	10/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
TP115	0.5 - 0.6 m	Fill	11/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
TP116	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP116	3 - 3.1 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP117	0.1 - 0.2 m	Fill	11/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
BD06	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP118	1 - 1.1 m	Fill	11/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
TP119	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP119	2.7 - 2.8 m	Natural	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP120	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP120	1.5 - 1.6 m	Fill	11/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
TP121	0.1 - 0.2 m	Fill	11/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	<0.5	<1	<0.5	<0.5
BD07-1	0 m	Fill	11/08/2022	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-
BD07	0.1 - 0.2 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP122	1 - 1.1 m	Fill	11/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP123	1 - 1.1 m	Fill	11/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
TP124	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP125	1.5 - 1.6 m	Fill	10/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
TP126	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP127	0.5 - 0.6 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP128	0.1 - 0.2 m	Fill	10/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	-	-	-	-
TP129	1 - 1.1 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
BD04	1 - 1.1 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP130	0.5 - 0.6 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	<0.5	<1	<0.5	<0.5
TP131	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP131	3 - 3.1 m	Fill	10/08/2022	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD	<0.5	<1	<0.5	<0.5
TP132	2 - 2.1 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	-	-
TP133	0.1 - 0.2 m	Fill	10/08/2022	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	<0.5	<1	<0.5	<0.5

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Table F2: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos, Additional PCB, Additional chemicals

				OCP		OPP	PCB								Asbestos			Additional chemicals			
				Total Endosulfan	Total Analysed OCP	Total Analysed OPP	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Aroclor 1260	Total PCB	Asbestos ID in soil >0.1g/kg	Trace Analysis	Total Asbestos	2,4-D [(2,4-Dichlorophenoxy) acetic acid]	Fluroxypyr	Picloram	Triclopyr
			PQL	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				0.5	1	0.5	0.5
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg
CT1				60	<50	4	NC	NC	NC	NC	NC	NC	NC	<50	NC	NC	NC	200	40	60	40
SCC1				108	<50	7.5	NC	NC	NC	NC	NC	NC	NC	<50	NC	NC	NC	10	75	110	75
TCLP1				N/A	N/A	N/A	NC	NC	NC	NC	NC	NC	NC	N/A	NC	NC	NC	N/A	N/A	N/A	N/A
CT2				240	<50	16	NC	NC	NC	NC	NC	NC	NC	<50	NC	NC	NC	800	160	240	160
SCC2				432	<50	30	NC	NC	NC	NC	NC	NC	NC	<50	NC	NC	NC	1440	300	440	300
TCLP2				N/A	N/A	N/A	NC	NC	NC	NC	NC	NC	NC	N/A	NC	NC	NC	N/A	N/A	N/A	N/A
NEPC (1999)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZECC (1992)				<0.001 - <0.97	-	-	-	-	-	-	-	-	-	0.02 – 0.1	-	-	-	-	-	-	-
ANZECC (2000)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CT1 exceedance TCLP1 and/or SCC1 exceedance CT2 exceedance TCLP2 and/or SCC2 exceedance Asbestos detection

NT = Not tested NL = Non limiting NC = No criteria NA = Not applicable

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Total chromium used as initial screen for chromium(VI).

c Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

f All criteria are in the same units as the reported results

PQL Practical quantitation limit

CT1 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste

SCC1 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

TCLP1 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

CT2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste

SCC2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

TCLP2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

Appendix G

Borehole and Test Pit Logs

Explanatory Notes

BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 39.1 AHD
EASTING: 305775
NORTHING: 6277166
DIP/AZIMUTH: 90°/--

BORE No: BH101
PROJECT No: 216255.00
DATE: 8/8/2022
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering	Graphic Log	Rock Strength	Water	Fracture Spacing (m)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
39	0.0	FILL/Sandy CLAY: low plasticity, brown, trace roadbase gravel, w<PL, moist, apparently firm							A/E			
	0.4	FILL/Sandy CLAY: low plasticity, orange-brown, trace ironstone gravel, sandstone boulders, w~PL, apparently stiff to hard							A/E			
38	1								A/E			
									S			4,15,16 N = 31
									A/E			
37	2								A/E			
									S			8,25,21 N = 46
36	3											
	3.5	FILL/Silty CLAY: medium plasticity, pale brown, trace ironstone, w~PL, apparently very stiff										
35	4								S			7,9,10 N = 19
34	5											
									S			4,8,9 N = 17
33	6											
32	7								S			4,25/150 refusal
	7.0	CLAY CL: low plasticity, pale brown, w~PL, hard, residual										
	7.3	SHALE: grey-brown, medium to high strength with low strength band, slightly weathered, fractured and slightly fractured, Ashfield Shale						7.38m: J45°, pl, cln 7.55m: J45°, pl, cln 7.59m: J45°, pl, fe stn 7.62m: J35°, pl, ro, fe stn 7.77m: J45°, pl, ro, fe stn 7.81-7.83m: fg, cly 7.98m: J45°, pl, sm, fe stn 8.14m: J35°, pl, sm, fe stn 8.22m: J60°, pl, sm, cln 8.25-8.30m: Ds 8.35m: J60°, pl, sm, cly 8.56-8.61m: fg, fe stn 8.80-8.83m: fg 9.13m: J60°, pl, sm, cln 9.25m: J25°, pl, sm, cln	C	100	75	PL(A) = 1
31	8											PL(A) = 2
30	9.0	SHALE: grey, high strength, fresh, slightly fractured and unbroken, Ashfield Shale							C	100	99	PL(A) = 1.3

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI/RS **CASING:** HW to 7.3m

TYPE OF BORING: Solid Flight Auger (TC-bit) to 7.3m, NMLC Coring to 11.55m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 39.1 AHD
EASTING: 305775
NORTHING: 6277166
DIP/AZIMUTH: 90°/--

BORE No: BH101
PROJECT No: 216255.00
DATE: 8/8/2022
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
29		SHALE: grey, high strength, fresh, slightly fractured and unbroken, Ashfield Shale *(continued)*						9.33m: J25°, pl, sm, cln 9.5m: J30°, pl, sm, cln 9.64m: J30°, pl, sm, cly 10.63m: B0°, fe stn 10.94m: J45°, pl, sm, cln	C	100	99	PL(A) = 1.4 PL(A) = 1.6
28	11											
	11.55	Bore discontinued at 11.55m Target Depth Reached										
27	12											
26	13											
25	14											
24	15											
23	16											
22	17											
21	18											
20	19											

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI/RS **CASING:** HW to 7.3m

TYPE OF BORING: Solid Flight Auger (TC-bit) to 7.3m, NMLC Coring to 11.55m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BORE: BH101 PROJECT: 216255.00 AUGUST 2022

7.30 – 11.55m

BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 36.9 AHD
EASTING: 305833
NORTHING: 6277128
DIP/AZIMUTH: 90°/--

BORE No: BH102
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
36	0	FILL/Sandy CLAY: low plasticity, grey-brown, trace roadbase gravel, w<PL, moist, apparently stiff							A/E			
	0.5	FILL/Sandy CLAY: low plasticity, grey-brown, w<PL, apparently stiff							A/E			
	1								A/E			
									S			5,5,5 N = 10
35	1.9	FILL/CLAY: medium plasticity, pale brown, trace silt, w~PL, apparently stiff							A/E*			pp >=350
	2								U_{75}			
34	3								S			4,4,6 N = 10
33	4											
	4.0	FILL/CLAY: high plasticity, pale grey mottled brown, trace ironstone gravel, w~PL, apparently very stiff							S			5,9,11 N = 20
32	5					▽						
31	6								S			4,10,17 N = 27
30	7								A/E			
	7.2	CLAY CI: medium plasticity, orange-brown, trace ironstone, w<PL, hard, residual							S			11,18,27 N = 45
29	8											
	8.5	SHALE: grey, very low and low strength, Ashfield Shale							A			
	8.7	Bore discontinued at 8.7m Target Depth Reached										
28	9											
27												

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI/RS **CASING:** Uncased

TYPE OF BORING: Solid Flight Auger (TC-bit) to 8.7m

WATER OBSERVATIONS: Water seep observed at 5.0m (probably perched water)

REMARKS: Location coordinates are in MGA94 Zone 56. *Field Replicate BD410082022 taken at 1.9-2.0m depth

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.2 AHD
EASTING: 305880
NORTHING: 6277088
DIP/AZIMUTH: 90°/--

BORE No: BH103
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
35	0.0	FILL/Sandy CLAY: low plasticity, grey-brown, trace roadbase gravel, w<PL, apparently firm							A/E			
	0.5	FILL/CLAY: low to medium plasticity, brown, w~PL, apparently stiff							A/E*			
34	1.0	FILL/RIPPED SANDSTONE: brown to red-brown, ripped sandstone gravel and boulder, dry, apparently well compacted							A/E S			25/100 refusal
	1.8	FILL/Sandy CLAY: low plasticity, grey-brown and red-brown, w~PL, apparently stiff to very stiff							A/E			
33	2.0								S			5,7,7 N = 14
32	3.0											
31	4.0								S			3,8,8 N = 16
	4.8	CLAY CH: high plasticity, pale brown, trace ironstone gravel, w~PL, very stiff, residual										
30	5.0											
29	6.0								S			6,11,15 N = 26
	7.0								S			25/50 refusal
28	7.2	SANDSTONE: medium grained, brown, very low strength, Hawkesbury Sandstone										PL(A) = 1.6
		SANDSTONE: medium grained, brown then pale grey-brown, medium to high strength, moderately weathered then slightly weathered, slightly fractured and unbroken, Hawkesbury Sandstone						7.3m: B10°, cly vn, ti 7.75m: B0°, cly 5mm 7.80-7.90m: Cs	C	100	90	
27	8.0							8.5m: B15°, cly vn, ti 8.8m: B0°, fe				PL(A) = 1
26	9.0							9.4m: B0°, cly co 2mm 9.56m: B5°, cly 5mm	C	100	99	PL(A) = 1.2

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI **CASING:** HW to 7.2m

TYPE OF BORING: Solid Flight Auger (TC-bit) to 7.2m, NMLC Coring to 11.50m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. *Field Replicate BD310082022 taken at 0.4-0.5m depth

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.2 AHD
EASTING: 305880
NORTHING: 6277088
DIP/AZIMUTH: 90°/--

BORE No: BH103
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
24	11	SANDSTONE: medium grained, brown then pale grey-brown, medium to high strength, moderately weathered then slightly weathered, slightly fractured and unbroken, Hawkesbury Sandstone *(continued)*						11.1m: B0°, fe 11.4m: B5°, fe	C	100	99	PL(A) = 1.1 PL(A) = 1.1
	11.5	Bore discontinued at 11.5m Target Depth Reached										

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI **CASING:** HW to 7.2m

TYPE OF BORING: Solid Flight Auger (TC-bit) to 7.2m, NMLC Coring to 11.50m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. *Field Replicate BD310082022 taken at 0.4-0.5m depth

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BORE: BH103 PROJECT: 216255.00 AUGUST 2022

7.20 – 11.50m

BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.3 AHD
EASTING: 305859
NORTHING: 6277046
DIP/AZIMUTH: 90°/--

BORE No: BH104
PROJECT No: 216255.00
DATE: 9/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
35	0	FILL/Sandy CLAY: low plasticity, pale grey and brown, trace ripped sandstone gravel and boulder, w<PL, apparently very stiff and hard							A/E*			
									A/E			
34	1								A/E			
									S			10,25/20 refusal
33	2								A/E			
	2.6	CLAY CH: medium plasticity, pale brown, w~PL, stiff, residual							S			3,4,8 N = 12
	3								A/E			
32	4											
31	4.2	Gravelly CLAY CL: low plasticity, red-brown, fine ironstone gravel, w~PL, hard, residual							S			7,15,23 N = 38
	5											
30	6								S			11,20,27 N = 47
29	6.5	CLAY CI: medium plasticity, pale grey and orange-brown, w<PL, hard, residual										
28	7	At 7.2m: extremely low strength shale										
	7.8	SHALE: grey, very low and low strength, Ashfield Shale										
27	8											
	8.4	Bore discontinued at 8.4m Target Depth Reached										
26	9											

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI **CASING:** Uncased

TYPE OF BORING: Solid Flight Auger (TC-bit) to 8.4m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. *Field Replicate BD209082022 taken at 0.1-0.2m depth

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.8 AHD
EASTING: 305825
NORTHING: 6277003
DIP/AZIMUTH: 90°/--

BORE No: BH105
PROJECT No: 216255.00
DATE: 9/8/2022
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
35	0.2	FILL/CLAY: low plasticity, pale grey-brown, w<PL, apparently stiff							A/E			
		FILL/Sandy CLAY: low plasticity, pale grey-brown, fine sand, trace sandstone gravel and boulders, w<PL, apparently very stiff							A/E B			
34	1								A/E S			14,13,15 N = 28
	2								A/E			
33	2.3	Silty CLAY CI: medium plasticity, pale brown, w~PL, stiff, residual							U_{75}			pp = 150
	3								S			5,6,8 N = 14
32	3.5	Gravelly Silty CLAY: low plasticity, red-brown to brown, fine ironstone gravel, w<PL, very stiff, residual										
	4								S			11,10,14 N = 24
31	4.5	CLAY CH: high plasticity, pale grey-brown, w~PL, very stiff, residual										
	5											
30									S			8,4,15 N = 19
	6											
29	7											
	7.0	CLAY CI: medium plasticity, pale grey and orange-brown, trace ironstone, w<PL, hard, residual							S			11,19,25 N = 44
28	8											
	8.0	SHALE: grey, very low and low strength, Ashfield Shale										
27	8.72	SHALE: grey-brown, low strength, highly to moderately weathered, slightly fractured, Ashfield Shale						8.75m: J30°, he, cly 8.87m: J70°, he, cly 9m: J30°, pl, sm, cln 9.24m: J90°, un, ro, cln 9.3m: J45°, ???, cly 9.33m: B, cly 10mm 9.39m: J45°, pl, sm, cln 9.47m: B0°, cln	C	100	71	PL(A) = 0.2 PL(A) = 0.7
	9											
26												

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI **CASING:** HW to 8.5m

TYPE OF BORING: Solid Flight Auger (TC-bit) to 8.5m, NMLC Coring to 13.00m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.8 AHD
EASTING: 305825
NORTHING: 6277003
DIP/AZIMUTH: 90°/--

BORE No: BH105
PROJECT No: 216255.00
DATE: 9/8/2022
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Type	Core Rec. %	RQD %	Test Results & Comments
25	10.15	SANDSTONE: medium to coarse grained, brown then pale grey, trace carbonaceous laminations, cross bedded 10°-20°, medium then high strength, moderately weathered then fresh, slightly fractured and unbroken, Hawkesbury Sandstone						9.51-9.54m: Cs 9.66m: J30°, pl, sm, cln 9.84m: J75°, pl, sm, cln 10.04m: B0°, cly 10.16m: B0°, cly and fe stn 10.18m: J60°, he, un, 10.39m: B0°, fe stn 10.43-10.47m: Ds 10.50-10.52m: B0°, cly 10.76m: J30°, pl, ro, cln 12.22m: B10°, cln 12.3m: B0°, cly	C	100	88	PL(A) = 0.8 PL(A) = 1.5 PL(A) = 1.6
24	11											
23	12											
22	13 13.0	Bore discontinued at 13.0m Target Depth Reached										
21	14											
20	15											
19	16											
18	17											
17	18											
16	19											

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI **CASING:** HW to 8.5m

TYPE OF BORING: Solid Flight Auger (TC-bit) to 8.5m, NMLC Coring to 13.00m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BORE: BH105 PROJECT: 216255.00 AUGUST 2022

8.72 – 13.00m

BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 37.6 AHD
EASTING: 305767
NORTHING: 6277037
DIP/AZIMUTH: 90°/--

BORE No: BH106
PROJECT No: 216255.00
DATE: 9/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
37	0.3	FILL/CLAY: low plasticity, pale grey-brown, trace roadbase gravel and grass roots, w<PL, apparently stiff							A/E			
									A/E			
		FILL/Sandy CLAY CL: low plasticity, mottled brown pale grey, fine sand, w~PL, apparently stiff							B			
1									A/E			
	1.4								S			5,9,14 N = 23
36		FILL/Sandy CLAY: low plasticity, brown, trace iron-cemented sandstone gravel, w<PL, apparently hard										
2												
35									S			3,7,8 N = 15
3	3.0	Silty CLAY CI: medium plasticity, grey-brown, trace fine sand, w~PL, stiff, residual										
34												
4									S			3,6,8 N = 14
33												
5	5.0	CLAY CI: medium plasticity, pale grey and brown, trace ironstone gravel and fine sand, w~PL, hard, residual										
32									S			5,19,25 N = 44
6												
31	6.8	SHALE: grey, very low and low strength, Ashfield Shale										
7	7.05	Bore discontinued at 7.05m Target Depth Reached							S			25/50 refusal
30												
8												
29												
9												
28												

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI **CASING:** Uncased

TYPE OF BORING: Solid Flight Auger (TC-bit) to 7.05m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 38.3 AHD
EASTING: 305764
NORTHING: 6277098
DIP/AZIMUTH: 90°/--

BORE No: BH107
PROJECT No: 216255.00
DATE: 8/8/2022
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Type	Core Rec. %	RQD %	Test Results & Comments
38	0.5	FILL/Sandy CLAY: low plasticity, brown and grey-brown, trace roadbase gravel and grass roots, w~PL, apparently firm to stiff							A/E*			
									A/E			
37	1	FILL/Gravelly Sandy CLAY: low plasticity, orange-brown, ripped sandstone gravel and boulders, w~PL, apparently very stiff to hard							A/E			
									S			10,17,9 N = 26
	1.5	FILL/Sandy CLAY: low plasticity, pale grey and brown, w~PL, apparently very stiff to hard										
36	2											
									S			5,12,18 N = 30
35	3											
34	4											
	4.0	CLAY CI: medium plasticity, pale grey and brown, w~PL, hard, residual							S			3,12,19 N = 31
33	5											
	5.0	SHALE: grey, very low strength, Ashfield Shale										
	5.5	SHALE: grey-brown, laminated, approximately 20% fine grained sandstone lamination, medium strength, moderately weathered, slightly fractured, Ashfield Shale						5.5m: CORE LOSS: 250mm	S			~~20/120~~ refusal
	5.75											PL(A) = 0.4
32	6							5.92m: B5°, cly 6.1m: J45°, pl, sm, cln 6.33-6.47m: J70°, pl, sm, cly	C	83	83	
												PL(A) = 0.8
31	7											
	7.0	SHALE: grey-brown, laminated, 20%-25% fine grained sandstone lamination, medium and high strength, moderately then slightly weathered, fractured and slightly fractured, Ashfield Shale						6.94m: J45°, un, ro, fe stn 7.16m: J45°, ti 7.52m: B0°, fe stn, cly 5mm				PL(A) = 1.1
30	8							8.1m: B5°, cly 5mm 8.4m: J30°, ti 8.52m: J70°, pl, sm, cln 8.68-8.88m: J45° x 5, pl, sm, cly or cln	C	100	82	PL(A) = 1.7
29	9											
	9.73	Bore discontinued at 9.73m Target Depth Reached						9.2m: B5°, fe stn 9.29m: B5°, fe stn 9.42m: J45°, ti 9.47m: J30°, pl, sm, cln 9.54-9.65m: J80°, pl, ro, fe stn				PL(A) = 0.8

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI **CASING:** HW to 5.5m

TYPE OF BORING: Solid Flight Auger (TC-bit) to 5.5m, NMLC Coring to 9.73m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. *Field Replicate BD108082022 taken at 0.1-0.2m depth

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 38.3 AHD
EASTING: 305764
NORTHING: 6277098
DIP/AZIMUTH: 90°/--

BORE No: BH107
PROJECT No: 216255.00
DATE: 8/8/2022
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
28								9.71m: J45°, pl, sm, cln				
	11											
27												
	12											
26												
	13											
25												
	14											
24												
	15											
23												
	16											
22												
	17											
21												
	18											
20												
	19											
19												

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI **CASING:** HW to 5.5m

TYPE OF BORING: Solid Flight Auger (TC-bit) to 5.5m, NMLC Coring to 9.73m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. *Field Replicate BD108082022 taken at 0.1-0.2m depth

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BORE: BH107 PROJECT: 216255.00 AUGUST 2022

5.50 – 9.73m

BOREHOLE LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 36.7 AHD
EASTING: 305817
NORTHING: 6277072
DIP/AZIMUTH: 90°/--

BORE No: BH108
PROJECT No: 216255.00
DATE: 9/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
36	0.3	FILL/Sandy CLAY: low plasticity, pale grey and brown, trace roadbase gravel, w<PL, apparently stiff							A/E			
									A/E			
35	1.0	FILL/Sandy CLAY: low plasticity, brown, fine sand, w~PL, apparently stiff							A/E			
									S			25/100 refusal
		FILL/RIPPED SANDSTONE: fine grained, ripped sandstone gravel and boulder, with sandy clay, apparently well compacted										
34	2.5	FILL/Sandy CLAY: low plasticity, brown and pale brown, fine sand, w~PL, apparently very stiff							A/E			
									S			5,7,12 N = 19
33	4.0	CLAY CH: high plasticity, pale grey and orange-brown, w~PL, very stiff, residual							A/E			
									S			4,8,12 N = 20
32									U_{50}			
31	5.7	CLAY CI: medium plasticity, pale brown, trace ironstone, w<PL, hard, residual							S			8,22,25 N = 47
30	6.8	SHALE: pale grey and grey-brown, very low and low strength, Ashfield Shale							S			17,25/40 refusal
29	7.19	Bore discontinued at 7.19m Target Depth Reached										

RIG: Comacchio Geo 305 **DRILLER:** Matrix Drilling **LOGGED:** SI **CASING:** Uncased

TYPE OF BORING: Solid Flight Auger (TC-bit) to 7.19m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 39.3 AHD
EASTING: 305770
NORTHING: 6277179

PIT No: TP109
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
39	0.3	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, dry		E	0.1 0.2				
	0.7	FILL/Crushed SANDSTONE: orange-brown, with sandy clay, dry		E	0.5 0.6				
		Pit discontinued at 0.7m Refusal on Sandstone Boulder							

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 38.6 AHD
EASTING: 305789
NORTHING: 6277162

PIT No: TP110
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm) 5 10 15 20
38	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, trace roots/rootlets, dry, apparently loose		E	0.1				
					0.2				
	0.3	FILL/Crushed SANDSTONE: orange-brown, with clayey sand		E	0.4				
					0.5				
	1	At 1.0m: approximately 600-700mm diameter sandstone boulder		E	1.0				1
					1.1				
37				E	1.5				
					1.6				
	1.8	FILL/CLAY: orange-brown, with sandstone and igneous gravel		E	2.0				2
	2				2.1				
36				E	2.5				
					2.6				
	3			E	3.0				3
	3.1	Pit discontinued at 3.1m Target Depth Reached			3.1				
35	4								4
34									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 37.8 AHD
EASTING: 305812
NORTHING: 6277146

PIT No: TP111
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
37	0.0	FILL/Sandy CLAY: dark grey-brown, with sandstone and igneous gravel, trace roots/rootlets, moist, apparently very stiff		E	0.1				
					0.2				
	0.4	FILL/Clayey SAND: orange-brown, with sandstone and igneous gravel, apparently medium dense to dense		E	0.5				
					0.6				
	1			E	1.0				1
					1.1				
				E	1.5				
		At 1.8m: trace sand			1.6				
36	2.0	FILL/CLAY: pale grey-orange		E	2.0				2
					2.1				
		At 2.8m: trace crushed sandstone							
35	3								3
	3.1	Pit discontinued at 3.1m Target Depth Reached							
34	4								4
33									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 36.4 AHD
EASTING: 305851
NORTHING: 6277122

PIT No: TP112
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
36	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, trace roots/rootlets, dry, loose		E	0.1				
					0.2				
	0.3	FILL/Clayey SAND: with sandstone and igneous gravel, dry							
				E	0.5				
					0.6				
	1			E	1.0				1
					1.1				
35	1.4	FILL/CLAY: pale orange-brown, with fine sandstone gravel		E	1.5				
					1.6				
	1.9	FILL/CLAY: pale grey-orange, with fine sandstone gravel, moist, apparently variably compacted, apparently stiff to hard		E	2.0				
	2				2.1				2
34				E	2.5		pp = 135-140		
		At 2.6m: grading to orange-brown, dry			2.6				
	3			E	3.0		pp = 450-520		3
	3.1	Pit discontinued at 3.1m Target Depth Reached			3.1				
33									
	4								4
32									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.6 AHD
EASTING: 305873
NORTHING: 6277110

PIT No: TP113
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
35	0.0	FILL/Sandy CLAY: dark grey-brown, apparently firm to stiff.		E	0.1				
					0.2				
	0.3	FILL/Clayey SAND: orange-brown, with crushed sandstone, moist, apparently loose to medium dense.		E	0.5				
					0.6				
	1			E	1.1				1
					1.2				
	1.3	FILL/Crushed SANDSTONE: orange-brown		E	1.5				
34	1.6	At 1.5m: boulders Pit discontinued at 1.6m on sandstone boulder			1.6				
	2								2
33									
	3								3
32									
	4								4
31									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 34.4 AHD
EASTING: 305899
NORTHING: 6277090

PIT No: TP114
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
34	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, with igneous and sandstone gravel (small), dry, apparently very stiff		E	0.1				
					0.2				
	0.3	FILL/Clayey SAND: medium to coarse, orange-grey, dry, apprently dense		E	0.5				
					0.6				
	0.7	FILL/Sandy CLAY: with sandstone boulders larger than 100 mm, apparently well compacted		E	1.0				
33	1				1.1				
				E	1.5				
					1.6				
	2			E	2.0				
					2.1				
32	2.2	Pit discontinued at 2.2m Refusal on Sandstone Boulder							
31	3								
30	4								

Dynamic Penetrometer Test (blows per 150mm): 5, 10, 15, 20

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: DCP refusal at 0.45m depth

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 38.9 AHD
EASTING: 305762
NORTHING: 6277142

PIT No: TP115
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
38	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, trace roots/rootlets, moist, apparently firm to stiff.		E	0.1		*PFAS		
					0.2				
	0.3	FILL/CLAY: orange-grey, with sandstone and igneous gravel, dry, apparently stiff to very stiff.		E	0.5		*PFAS		
					0.6				
	1			E	1.0				1
					1.1				
		At 1.5m: approximately 300-400mm diameter sandstone boulders		E	1.5				
37					1.6				
	2			E	2.0				2
					2.1				
				E	2.5				
	2.6	Pit discontinued at 2.6m Refusal on Sandstone Boulder			2.6				
36	3								3
35	4								4
34									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *PFAS sample collected

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 38.2 AHD
EASTING: 305788
NORTHING: 6277129

PIT No: TP116
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
38	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, trace roots/rootlets, apparently firm to stiff.		E	0.1				
					0.2				
	0.3	FILL/CLAY: orange-brown, with sandstone gravel, dry, apparently stiff to very stiff		E	0.5				
					0.6				
	1			E	1.0				1
					1.1				
37	1.2	FILL/Clayey SAND: orange-grey, with sandstone and igneous gravel, dry		E	1.5				
					1.6				
	2			E	2.0				2
36					2.1				
				E	2.5				
					2.6				
	2.8	FILL/Clayey SAND: brown-red, trace shale, dry (possibly natural)							
	3			E	3.0				3
	3.1	Pit discontinued at 3.1m Target Depth Reached			3.1				
35									
	4								4
34									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 36.8 AHD
EASTING: 305822
NORTHING: 6277102

PIT No: TP117
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
36	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, trace sandstone gravel, moist		E*	0.1 0.2				
	0.3	FILL/Clayey SAND: orange-brown, with crushed sandstone, dry		E	0.5 0.6				
	1			E	1.0 1.1				1
	1.3	FILL/Clayey SAND: dark grey-brown, with 100 mm sized sandstone cobbles		E	1.4 1.5				
35	2			E	2.0 2.1				2
	2.3	FILL/Clayey SAND: orange-grey, with sandstone gravel, dry		E	2.4 2.5				
	2.6	Pit discontinued at 2.6m Refusal on Sandstone Boulder							
34	3								3
33	4								4
32									

Dynamic Penetrometer Test (blows per mm): 5, 10, 15, 20

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Field Replicate BD06 taken at 0.1-0.2m depth

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 36.0 AHD
EASTING: 305846
NORTHING: 6277086

PIT No: TP118
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)
36	0.0	FILL/Crushed SANDSTONE: pale grey-brown, with medium gravel, apparently medium dense		E	0.1				
					0.2				
				E	0.5				
					0.6				
	0.7	FILL/CLAY: orange-brown, moist, apprently stiff to very stiff							
35	1			E	1.0				1
					1.1				
	1.3	FILL/Crushed SANDSTONE: with sandstone cobbles larger than 100 mm, apparently well compacted		E	1.5				
	1.6	Pit discontinued at 1.6m Refusal on compacted material			1.6				
34	2								2
33	3								3
32	4								4

Dynamic Penetrometer Test (blows per 150mm): 5, 10, 15, 20

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: DCP refusal at 0.9m

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.2 AHD
EASTING: 305873
NORTHING: 6277068

PIT No: TP119
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
35	0.0	FILL/Clayey SAND: dark grey-brown, medium to coarse grained sand, trace roots and rootlets, sandstone and igneous gravel, dry		E	0.1				
					0.2				
	0.4	FILL/CLAY: orange-brown, with medium sized crushed sandstone cobbles and gravel, dry		E	0.5				
					0.6				
	0.9	FILL/Sandy CLAY: grey-brown, with crushed sandstone, dry		E	1.0				
34	1				1.1				1
		At 1.4m: apparently well compacted		E	1.5				
					1.6				
	2			E	2.0				2
33					2.1				
	2.6	CLAY: orange-grey, apparently stiff (possibly fill)		E	2.7				
	2.8	Pit discontinued at 2.8m Target Depth Reached			2.8				
32	3								3
31	4								4

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 38.6 AHD
EASTING: 305759
NORTHING: 6277118

PIT No: TP120
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
38	0.0	FILL/Sandy CLAY: dark grey-brown, trace roots/rootlets and sandstone gravel, dry		E	0.1				
					0.2				
	0.4	FILL/Crushed SANDSTONE: pale grey-orange, with sand and clay, dry, apparently well compacted		E	0.5				
					0.6				
	1			E	1.0				1
					1.1				
37				E	1.5				
					1.6				
	2			E	2.0				2
					2.1				
	2.3	FILL/CLAY: orange-grey, with sandstone and igneous gravel, dry		E	2.5				
36					2.6				
	2.7	Pit discontinued at 2.7m Refusal on compacted material							
	3								3
35									
	4								4
34									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 37.8 AHD
EASTING: 305785
NORTHING: 6277091

PIT No: TP121
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
37	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, trace roots/rootlets		E*	0.1 0.2				
	0.4	FILL/Crushed SANDSTONE: pale grey-brown, with sandstone cobbles larger than 100mm, apparently well compacted		E	0.5 0.6				
	1.0	FILL/CLAY: orange-brown, dry		E	1.0 1.1				
	1.3	FILL/Crushed SANDSTONE: pale grey-brown, apparently well compacted		E	1.4				
	1.5	Pit discontinued at 1.5m Refusal on compacted material			1.5				

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Field Replicate BD07 taken at 0.1-0.2m depth

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 37.2 AHD
EASTING: 305809
NORTHING: 6277093

PIT No: TP122
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
37	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, trace roots/rootlets, moist		E	0.1				
					0.2				
	0.4	FILL/Clayey SAND: pale grey-brown, with crushed sandstone, dry, apparently well compacted		E	0.5				
					0.6				
36	1			E	1.0				1
					1.1				
				E	1.5				
	1.6	Pit discontinued at 1.6m Refusal on apparently well compacted crushed sandstone and boulders			1.6				
35	2								2
34	3								3
33	4								4

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.9 AHD
EASTING: 305840
NORTHING: 6277059

PIT No: TP123
PROJECT No: 216255.00
DATE: 11/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
35	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, moist		E	0.1 0.2				
	0.4	FILL/Clayey SAND: grey-brown, with sandstone and igneous gravel, dry		E	0.5 0.6				
34	1.0	FILL/CLAY: orange-brown, with sandstone gravel, dry		E*	1.0 1.1		*PFAS		
	1.3	FILL/Crushed SANDSTONE: ranging fine gravel to boulder size, apparently well compacted		E	1.5				
33	1.6	Pit discontinued at 1.6m Target Depth Reached			1.6				
32									
31									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Field Replicate BD05 taken at 1.0-1.1m depth

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.0 AHD
EASTING: 305876
NORTHING: 6277052

PIT No: TP124
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
35	0.0	FILL/Sandy CLAY: dark grey-brown, trace roots and rootlets, apparently very stiff to hard		E	0.1 0.2		pp = 400-500		
	0.3	FILL/Clayey SAND: brown-grey, with crushed sandstone gravel, dry, apparently well compacted		E	0.5 0.6				
	0.7	FILL/Clayey SAND: grey-brown, with sandstone and igneous gravel, dry, apparently well compacted		E	1.0 1.1				
34	1	At 1.4m: with 200mm sized sandstone boulders		E	1.5 1.6				1
33	2			E	2.0 2.1				2
	2.5	FILL/Clayey SAND: orange-brown		E	2.5 2.6				
32	3								3
	3.0	FILL/CLAY: orange-red, decomposed roots, trace transparent plastic wrapping, apparently stiff		E	3.2 3.3		*PFAS pp = 150-180		
	3.5	Pit discontinued at 3.5m Target Depth Reached							
31	4								4

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *PFAS sample collected

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 38.2 AHD
EASTING: 305754
NORTHING: 6277067

PIT No: TP125
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
38	0.0	FILL/Sandy CLAY: dark grey-black, dry		E*	0.1 0.2				
	0.4	FILL/Clayey SAND: medium to coarse, pale grey-brown		E	0.5				
	0.6	FILL/Crushed SANDSTONE: pale grey-orange, apparently well compacted		E	0.6 1.0 1.1				
37	1.3	FILL/CLAY: orange-brown		E	1.5				
	1.6	Pit discontinued at 1.6m on sandstone boulder			1.6				
36	2								
35	3								
34	4								

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Field Replicate BD02 taken at 0.1-0.2m depth

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 37.4 AHD
EASTING: 305782
NORTHING: 6277052

PIT No: TP126
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm) 5 10 15 20
37	0.1	FILL/Sandy CLAY: dark grey-brown, with crushed sandstone, trace roots and rootlets		E*	0.1 0.2				
	0.4	FILL/Crushed SANDSTONE							
	0.5	FILL/CLAY: orange-brown, dry		E	0.5 0.6				
36	1.0	FILL/Crushed SANDSTONE: orange-brown, dry		E	1.0 1.1				
				E	1.5				
	1.6	Pit discontinued at 1.6m on sandstone boulder			1.6				
35									
34									
33									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Field Replicate BD03 taken at 0.1-0.2m depth

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 36.6 AHD
EASTING: 305805
NORTHING: 6277038

PIT No: TP127
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
36	0.0	FILL/Sandy CLAY: dark grey-brown, trace roots and rootlets, dry		E	0.1				
					0.2				
	0.4	FILL/Clayey SAND: grey-brown, dry, apparently well compacted		E	0.5				
					0.6				
	1.0	FILL/CLAY: orange-brown, with sandstone boulders		E	1.0				
					1.1				
				E	1.5				
35	1.6	Pit discontinued at 1.6m due to sandstone boulder			1.6				
34									
33									
32									

Dynamic Penetrometer Test (blows per mm): 5, 10, 15, 20; 1, 2, 3, 4

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 36.0 AHD
EASTING: 305829
NORTHING: 6277025

PIT No: TP128
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
36	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, trace roots and rootlets, moist							
	0.4	FILL/Clayey SAND: orange-brown, with crushed sandstone, apparently well compacted							
	0.7	FILL/Crushed SANDSTONE: pale grey-brown							
35	1.0	FILL/CLAY: orange-brown, dry							1
	1.2	FILL/Crushed SANDSTONE BOULDERS							
	1.7	Pit discontinued at 1.7m on sandstone boulder							
34	2								2
33	3								3
32	4								4

Dynamic Penetrometer Test (blows per mm): 5, 10, 15, 20

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.3 AHD
EASTING: 305850
NORTHING: 6277018

PIT No: TP129
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm) 5 10 15 20
35	0.1	FILL/Sandy CLAY: dark grey-brown, with sandstone and igneous gravel, dry		E	0.1 0.2				
	0.4	FILL/Clayey SAND: orange-brown, dry		E	0.5 0.6				
	1			E*	1.1				1
34	1.2	Pit discontinued at 1.2m on sandstone boulder			1.2				
	2								2
33									
	3								3
32									
	4								4
31									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Field Replicate BD04 taken at 1.1-1.2m depth

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 37.8 AHD
EASTING: 305751
NORTHING: 6277026

PIT No: TP130
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
37	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, with sandstone and igneous gravel, moist		E	0.1				
					0.2				
	0.3	FILL/Clayey SAND: medium to coarse, with sandstone gravel, dry		E	0.5				
					0.6				
	1			E	1.0				1
					1.1				
	1.3	FILL/Crushed SANDSTONE: pale grey-brown, with sandstone boulder		E	1.5				
36	1.6	Pit discontinued at 1.6m due to refusal on sandstone boulder			1.6				
	2								2
35	3								3
34	4								4
33									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 36.9 AHD
EASTING: 305782
NORTHING: 6277017

PIT No: TP131
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
36	0.0	FILL/Sandy CLAY: dark grey-brown, medium to coarse sand, with sandstone and igneous gravel, moist		E	0.1		*PFAS		
					0.2				
	0.3	FILL/Clayey SAND: grey-brown, with crushed sandstone gravel, apparently well compacted		E	0.5				
					0.6				
	1.0	FILL/Crushed SANDSTONE: pale grey-brown, with sandstone boulders		E	1.0				
					1.1				
				E	1.5				
					1.6				
35	2.0			E	2.0				
					2.1				
	2.2	FILL/Clayey SAND: grey-brown, with crushed sandstone gravel, apparently well compacted							
34	3.0			E	3.0		*PFAS		
	3.1	Pit discontinued at 3.1m Target Depth Reached			3.1				
33	4.0								
32									

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 36.2 AHD
EASTING: 305802
NORTHING: 6276998

PIT No: TP132
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
36	0.0	FILL/Sandy CLAY: grey-brown, medium to coarse sand, with sandstone and igneous gravel, trace roots and rootlets, dry		E	0.1 0.2				
	0.4	FILL/Clayey SAND: grey-orange, with sandstone gravel		E	0.5 0.6				
35	1			E	1.0 1.1				1
	1.3	FILL/Crushed SANDSTONE: orange-pale grey, apparently well compacted		E	1.5 1.6				
34	2			E	2.0 2.1		* PFAS		2
	2.8	CLAY: orange-brown, apparently very stiff							
33	3	Pit discontinued at 3.0m Target Depth Reached							3
32	4								4

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *PFAS sample collected

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

TEST PIT LOG

CLIENT: School Infrastructure NSW
PROJECT: Proposed Gables Public School
LOCATION: Fontana Drive, Gables

SURFACE LEVEL: 35.5 AHD
EASTING: 305828
NORTHING: 6276987

PIT No: TP133
PROJECT No: 216255.00
DATE: 10/8/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per mm)
35	0.0	FILL/Sandy CLAY: grey-brown, with sandstone and igneous gravel, dry		E*	0.1–0.2				
	0.5	FILL/Clayey SAND: brown-grey, with crushed sandstone and igneous rock, dry, apparently well compacted		E	0.5–0.6				
	1			E	1.0–1.1				1
	1.3	Pit discontinued at 1.3m due to refusal on sandstone boulder and well compacted sandstone							
34	2								2
33	3								3
32	4								4
31									

Dynamic Penetrometer Test (blows per mm): 5, 10, 15, 20

RIG: 3.5t Excavator with 450mm bucket

LOGGED: VV

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: *Field Replicate BD01 taken at 0.1-0.2m depth

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Sampling Methods

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Sampling

Sampling is carried out during drilling or test pitting to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on colour, type, inclusions and, depending upon the degree of disturbance, some information on strength and structure.

Undisturbed samples are taken by pushing a thin-walled sample tube into the soil and withdrawing it to obtain a sample of the soil in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

Test Pits

Test pits are usually excavated with a backhoe or an excavator, allowing close examination of the in-situ soil if it is safe to enter into the pit. The depth of excavation is limited to about 3 m for a backhoe and up to 6 m for a large excavator. A potential disadvantage of this investigation method is the larger area of disturbance to the site.

Large Diameter Augers

Boreholes can be drilled using a rotating plate or short spiral auger, generally 300 mm or larger in diameter commonly mounted on a standard piling rig. The cuttings are returned to the surface at intervals (generally not more than 0.5 m) and are disturbed but usually unchanged in moisture content. Identification of soil strata is generally much more reliable than with continuous spiral flight augers, and is usually supplemented by occasional undisturbed tube samples.

Continuous Spiral Flight Augers

The borehole is advanced using 90-115 mm diameter continuous spiral flight augers which are withdrawn at intervals to allow sampling or in-situ testing. This is a relatively economical means of drilling in clays and sands above the water table. Samples are returned to the surface, or may be collected after withdrawal of the auger flights, but they are disturbed and may be mixed with soils from the sides of the hole. Information from the drilling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively low reliability, due to the remoulding, possible mixing or softening of samples by groundwater.

Non-core Rotary Drilling

The borehole is advanced using a rotary bit, with water or drilling mud being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from the rate of penetration. Where drilling mud is used this can mask the cuttings and reliable identification is only possible from separate sampling such as SPTs.

Continuous Core Drilling

A continuous core sample can be obtained using a diamond tipped core barrel, usually with a 50 mm internal diameter. Provided full core recovery is achieved (which is not always possible in weak rocks and granular soils), this technique provides a very reliable method of investigation.

Standard Penetration Tests

Standard penetration tests (SPT) are used as a means of estimating the density or strength of soils and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, Methods of Testing Soils for Engineering Purposes - Test 6.3.1.

The test is carried out in a borehole by driving a 50 mm diameter split sample tube under the impact of a 63 kg hammer with a free fall of 760 mm. It is normal for the tube to be driven in three successive 150 mm increments and the 'N' value is taken as the number of blows for the last 300 mm. In dense sands, very hard clays or weak rock, the full 450 mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form.

- In the case where full penetration is obtained with successive blow counts for each 150 mm of, say, 4, 6 and 7 as:

  4,6,7
  N=13

- In the case where the test is discontinued before the full penetration depth, say after 15 blows for the first 150 mm and 30 blows for the next 40 mm as:

  15, 30/40 mm

The results of the SPT tests can be related empirically to the engineering properties of the soils.

Dynamic Cone Penetrometer Tests / Perth Sand Penetrometer Tests

Dynamic penetrometer tests (DCP or PSP) are carried out by driving a steel rod into the ground using a standard weight of hammer falling a specified distance. As the rod penetrates the soil the number of blows required to penetrate each successive 150 mm depth are recorded. Normally there is a depth limitation of 1.2 m, but this may be extended in certain conditions by the use of extension rods. Two types of penetrometer are commonly used.

- Perth sand penetrometer - a 16 mm diameter flat ended rod is driven using a 9 kg hammer dropping 600 mm (AS 1289, Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.
- Cone penetrometer - a 16 mm diameter rod with a 20 mm diameter cone end is driven using a 9 kg hammer dropping 510 mm (AS 1289, Test 6.3.2). This test was developed initially for pavement subgrade investigations, and correlations of the test results with California Bearing Ratio have been published by various road authorities.

Description and Classification Methods

The methods of description and classification of soils and rocks used in this report are generally based on Australian Standard AS1726:2017, Geotechnical Site Investigations. In general, the descriptions include strength or density, colour, structure, soil or rock type and inclusions.

Soil Types

Soil types are described according to the predominant particle size, qualified by the grading of other particles present:

Type	Particle size (mm)
Boulder	>200
Cobble	63 - 200
Gravel	2.36 - 63
Sand	0.075 - 2.36
Silt	0.002 - 0.075
Clay	<0.002

The sand and gravel sizes can be further subdivided as follows:

Type	Particle size (mm)
Coarse gravel	19 - 63
Medium gravel	6.7 - 19
Fine gravel	2.36 – 6.7
Coarse sand	0.6 - 2.36
Medium sand	0.21 - 0.6
Fine sand	0.075 - 0.21

Definitions of grading terms used are:

- Well graded - a good representation of all particle sizes
- Poorly graded - an excess or deficiency of particular sizes within the specified range
- Uniformly graded - an excess of a particular particle size
- Gap graded - a deficiency of a particular particle size with the range

The proportions of secondary constituents of soils are described as follows:

In fine grained soils (>35% fines)

Term	Proportion of sand or gravel	Example
And	Specify	Clay (60%) and Sand (40%)
Adjective	>30%	Sandy Clay
With	15 – 30%	Clay with sand
Trace	0 - 15%	Clay with trace sand

In coarse grained soils (>65% coarse)
- with clays or silts

Term	Proportion of fines	Example
And	Specify	Sand (70%) and Clay (30%)
Adjective	>12%	Clayey Sand
With	5 - 12%	Sand with clay
Trace	0 - 5%	Sand with trace clay

In coarse grained soils (>65% coarse)
- with coarser fraction

Term	Proportion of coarser fraction	Example
And	Specify	Sand (60%) and Gravel (40%)
Adjective	>30%	Gravelly Sand
With	15 - 30%	Sand with gravel
Trace	0 - 15%	Sand with trace gravel

The presence of cobbles and boulders shall be specifically noted by beginning the description with ‘Mix of Soil and Cobbles/Boulders’ with the word order indicating the dominant first and the proportion of cobbles and boulders described together.

Soil Descriptions

Cohesive Soils

Cohesive soils, such as clays, are classified on the basis of undrained shear strength. The strength may be measured by laboratory testing, or estimated by field tests or engineering examination. The strength terms are defined as follows:

Description	Abbreviation	Undrained shear strength (kPa)
Very soft	VS	<12
Soft	S	12 - 25
Firm	F	25 - 50
Stiff	St	50 - 100
Very stiff	VSt	100 - 200
Hard	H	>200
Friable	Fr	-

Cohesionless Soils

Cohesionless soils, such as clean sands, are classified on the basis of relative density, generally from the results of standard penetration tests (SPT), cone penetration tests (CPT) or dynamic penetrometers (PSP). The relative density terms are given below:

Relative Density	Abbreviation	Density Index (%)
Very loose	VL	<15
Loose	L	15-35
Medium dense	MD	35-65
Dense	D	65-85
Very dense	VD	>85

Soil Origin

It is often difficult to accurately determine the origin of a soil. Soils can generally be classified as:

- Residual soil - derived from in-situ weathering of the underlying rock;
- Extremely weathered material – formed from in-situ weathering of geological formations. Has soil strength but retains the structure or fabric of the parent rock;
- Alluvial soil – deposited by streams and rivers;
- Estuarine soil – deposited in coastal estuaries;
- Marine soil – deposited in a marine environment;
- Lacustrine soil – deposited in freshwater lakes;
- Aeolian soil – carried and deposited by wind;
- Colluvial soil – soil and rock debris transported down slopes by gravity;
- Topsoil – mantle of surface soil, often with high levels of organic material.
- Fill – any material which has been moved by man.

Moisture Condition – Coarse Grained Soils

For coarse grained soils the moisture condition should be described by appearance and feel using the following terms:

- Dry (D) Non-cohesive and free-running.
- Moist (M) Soil feels cool, darkened in colour.
  Soil tends to stick together.
  Sand forms weak ball but breaks easily.
- Wet (W) Soil feels cool, darkened in colour.
  Soil tends to stick together, free water forms when handling.

Moisture Condition – Fine Grained Soils

For fine grained soils the assessment of moisture content is relative to their plastic limit or liquid limit, as follows:

- ‘Moist, dry of plastic limit’ or ‘w <PL’ (i.e. hard and friable or powdery).
- ‘Moist, near plastic limit’ or ‘w ≈ PL (i.e. soil can be moulded at moisture content approximately equal to the plastic limit).
- ‘Moist, wet of plastic limit’ or ‘w >PL’ (i.e. soils usually weakened and free water forms on the hands when handling).
- ‘Wet’ or ‘w ≈LL’ (i.e. near the liquid limit).
- ‘Wet’ or ‘w >LL’ (i.e. wet of the liquid limit).

Rock Strength

Rock strength is defined by the Unconfined Compressive Strength and it refers to the strength of the rock substance and not the strength of the overall rock mass, which may be considerably weaker due to defects.

The Point Load Strength Index $Is_{(50)}$ is commonly used to provide an estimate of the rock strength and site specific correlations should be developed to allow UCS values to be determined. The point load strength test procedure is described by Australian Standard AS4133.4.1-2007. The terms used to describe rock strength are as follows:

Strength Term	Abbreviation	Unconfined Compressive Strength MPa	Point Load Index * $Is_{(50)}$ MPa
Very low	VL	0.6 - 2	0.03 - 0.1
Low	L	2 - 6	0.1 - 0.3
Medium	M	6 - 20	0.3 - 1.0
High	H	20 - 60	1 - 3
Very high	VH	60 - 200	3 - 10
Extremely high	EH	>200	>10

* Assumes a ratio of 20:1 for UCS to $Is_{(50)}$. It should be noted that the UCS to $Is_{(50)}$ ratio varies significantly for different rock types and specific ratios should be determined for each site.

Degree of Weathering

The degree of weathering of rock is classified as follows:

Term	Abbreviation	Description
Residual Soil	RS	Material is weathered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are no longer visible, but the soil has not been significantly transported.
Extremely weathered	XW	Material is weathered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are still visible
Highly weathered	HW	The whole of the rock material is discoloured, usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable. Rock strength is significantly changed by weathering. Some primary minerals have weathered to clay minerals. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores.
Moderately weathered	MW	The whole of the rock material is discoloured , usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable, but shows little or no change of strength from fresh rock.
Slightly weathered	SW	Rock is partially discoloured with staining or bleaching along joints but shows little or no change of strength from fresh rock.
Fresh	FR	No signs of decomposition or staining.
Note: If HW and MW cannot be differentiated use DW (see below)		
Distinctly weathered	DW	Rock strength usually changed by weathering. The rock may be highly discoloured, usually by iron staining. Porosity may be increased by leaching or may be decreased due to deposition of weathered products in pores.

Rock Descriptions

Degree of Fracturing

The following classification applies to the spacing of natural fractures in diamond drill cores. It includes bedding plane partings, joints and other defects, but excludes drilling breaks.

Term	Description
Fragmented	Fragments of <20 mm
Highly Fractured	Core lengths of 20-40 mm with occasional fragments
Fractured	Core lengths of 30-100 mm with occasional shorter and longer sections
Slightly Fractured	Core lengths of 300 mm or longer with occasional sections of 100-300 mm
Unbroken	Core contains very few fractures

Rock Quality Designation

The quality of the cored rock can be measured using the Rock Quality Designation (RQD) index, defined as:

$$\text{RQD \%} = \frac{\text{cumulative length of 'sound' core sections} \geq \text{100 mm long}}{\text{total drilled length of section being assessed}}$$

where 'sound' rock is assessed to be rock of low strength or stronger. The RQD applies only to natural fractures. If the core is broken by drilling or handling (i.e. drilling breaks) then the broken pieces are fitted back together and are not included in the calculation of RQD.

Stratification Spacing

For sedimentary rocks the following terms may be used to describe the spacing of bedding partings:

Term	Separation of Stratification Planes
Thinly laminated	< 6 mm
Laminated	6 mm to 20 mm
Very thinly bedded	20 mm to 60 mm
Thinly bedded	60 mm to 0.2 m
Medium bedded	0.2 m to 0.6 m
Thickly bedded	0.6 m to 2 m
Very thickly bedded	> 2 m

Symbols & Abbreviations

Introduction

These notes summarise abbreviations commonly used on borehole logs and test pit reports.

Drilling or Excavation Methods

C	Core drilling
R	Rotary drilling
SFA	Spiral flight augers
NMLC	Diamond core - 52 mm dia
NQ	Diamond core - 47 mm dia
HQ	Diamond core - 63 mm dia
PQ	Diamond core - 81 mm dia

Water

▷	Water seep
▽	Water level

Sampling and Testing

A	Auger sample
B	Bulk sample
D	Disturbed sample
E	Environmental sample
U_{50}	Undisturbed tube sample (50mm)
W	Water sample
pp	Pocket penetrometer (kPa)
PID	Photo ionisation detector
PL	Point load strength Is(50) MPa
S	Standard Penetration Test
V	Shear vane (kPa)

Description of Defects in Rock

The abbreviated descriptions of the defects should be in the following order: Depth, Type, Orientation, Coating, Shape, Roughness and Other. Drilling and handling breaks are not usually included on the logs.

Defect Type

B	Bedding plane
Cs	Clay seam
Cv	Cleavage
Cz	Crushed zone
Ds	Decomposed seam
F	Fault
J	Joint
Lam	Lamination
Pt	Parting
Sz	Sheared Zone
V	Vein

Orientation

The inclination of defects is always measured from the perpendicular to the core axis.

h	horizontal
v	vertical
sh	sub-horizontal
sv	sub-vertical

Coating or Infilling Term

cln	clean
co	coating
he	healed
inf	infilled
stn	stained
ti	tight
vn	veneer

Coating Descriptor

ca	calcite
cbs	carbonaceous
cly	clay
fe	iron oxide
mn	manganese
slt	silty

Shape

cu	curved
ir	irregular
pl	planar
st	stepped
un	undulating

Roughness

po	polished
ro	rough
sl	slickensided
sm	smooth
vr	very rough

Other

fg	fragmented
bnd	band
qtz	quartz

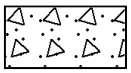
Symbols & Abbreviations

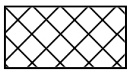
Graphic Symbols for Soil and Rock

General

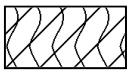

Asphalt

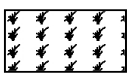

Road base

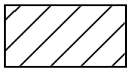

Concrete

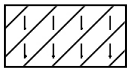

Filling

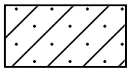
Soils


Topsoil

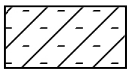

Peat

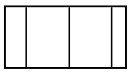

Clay

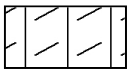

Silty clay

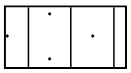

Sandy clay

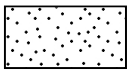

Gravelly clay

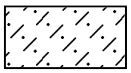

Shaly clay

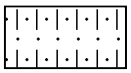

Silt


Clayey silt


Sandy silt

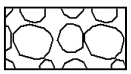

Sand

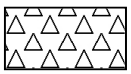

Clayey sand


Silty sand


Gravel

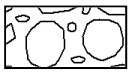

Sandy gravel


Cobbles, boulders

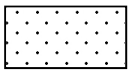

Talus

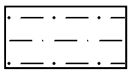
Sedimentary Rocks

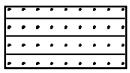

Boulder conglomerate

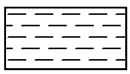

Conglomerate


Conglomeratic sandstone

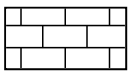

Sandstone


Siltstone

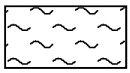

Laminite

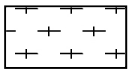

Mudstone, claystone, shale

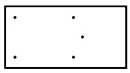

Coal


Limestone

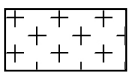
Metamorphic Rocks

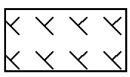

Slate, phyllite, schist

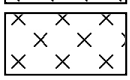

Gneiss

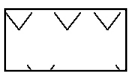

Quartzite

Igneous Rocks


Granite


Dolerite, basalt, andesite


Dacite, epidote


Tuff, breccia


Porphyry

Appendix H

Laboratory Certificates of Analysis, Chains of Custody

and Sample Receipt Advice

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 303082

Client Details

Client	Douglas Partners Pty Ltd
Attention	Celine Li
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**216255.01, Box Hill**
Number of Samples	46 Soil
Date samples received	12/08/2022
Date completed instructions received	15/08/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	23/08/2022
Date of Issue	23/08/2022

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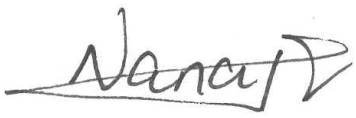
Asbestos Approved By
Analysed by Asbestos Approved Analyst: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Diego Bigolin, Inorganics Supervisor
Giovanni Agosti, Group Technical Manager
Greta Petzold, Assistant Operation Manager
Josh Williams, Organics and LC Supervisor
Kyle Gavrily, Senior Chemist
Liam Timmins, Organic Instruments Team Leader
Loren Bardwell, Development Chemist
Lucy Zhu, Asbestos Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		303082-1	303082-2	303082-3	303082-4	303082-5
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.2	1.9-2	0.1-0.2	6.9-7	1.9-2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	92	95	88	98	76

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		303082-6	303082-7	303082-8	303082-9	303082-10
Your Reference	UNITS	BH104	BH104	BH105	BH106	BH107
Depth		0.4-0.5	2.7-3	0..1-0.2	0.4-0.5	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	87	91	92	99	84

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		303082-12	303082-13	303082-14	303082-15	303082-16
Your Reference	UNITS	BH108	TP109	TP110	TP111	TP112
Depth		3.9-4	0.1-0.2	2-2.1	0.1-0.2	1.5-1.6
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	23/08/2022	22/08/2022	22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	101	89	103	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		303082-17	303082-18	303082-19	303082-20	303082-21
Your Reference	UNITS	TP113	TP114	TP115	TP116	TP116
Depth		0.1-0.2	0.5-0.6	0.5-0.6	0.1-0.2	3-3.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	99	94	100	95	103

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		303082-22	303082-24	303082-25	303082-26	303082-27
Your Reference	UNITS	TP117	TP118	TP119	TP119	TP120
Depth		0.1-0.2	1-1.1	0.1-0.2	2.7-2.8	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	109	89	97	93	100

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		303082-28	303082-29	303082-31	303082-32	303082-33
Your Reference	UNITS	TP120	TP121	TP122	TP123	TP124
Depth		1.5-1.6	0.1-0.2	1-1.1	1-1.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	101	116	94	90	108

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		303082-34	303082-35	303082-36	303082-37	303082-38
Your Reference	UNITS	TP125	TP126	TP127	TP128	TP129
Depth		1.5-1.6	0.1-0.2	0.5-0.6	0.1-0.2	1-1.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	103	93	91	93	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		303082-40	303082-41	303082-42	303082-43	303082-44
Your Reference	UNITS	TP130	TP131	TP131	TP132	TP133
Depth		0.5-0.6	0.1-0.2	3-3.1	2-2.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	88	91	104	94	98

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		303082-45	303082-46
Your Reference	UNITS	TS	TB
Depth		-	-
Type of sample		Soil	Soil
Date extracted	-	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	[NA]	<25
TRH C_6 - C_{10}	mg/kg	[NA]	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	[NA]	<25
Benzene	mg/kg	87%	<0.2
Toluene	mg/kg	88%	<0.5
Ethylbenzene	mg/kg	84%	<1
m+p-xylene	mg/kg	84%	<2
o-Xylene	mg/kg	85%	<1
Naphthalene	mg/kg	[NA]	<1
Total +ve Xylenes	mg/kg	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	89	109

svTRH (C10-C40) in Soil						
Our Reference		303082-1	303082-2	303082-3	303082-4	303082-5
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.2	1.9-2	0.1-0.2	6.9-7	1.9-2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	80	79	79	81	80

svTRH (C10-C40) in Soil						
Our Reference		303082-6	303082-7	303082-8	303082-9	303082-10
Your Reference	UNITS	BH104	BH104	BH105	BH106	BH107
Depth		0.4-0.5	2.7-3	0..1-0.2	0.4-0.5	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	78	81	82	82	77

svTRH (C10-C40) in Soil						
Our Reference		303082-12	303082-13	303082-14	303082-15	303082-16
Your Reference	UNITS	BH108	TP109	TP110	TP111	TP112
Depth		3.9-4	0.1-0.2	2-2.1	0.1-0.2	1.5-1.6
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	82	79	78	77	81

svTRH (C10-C40) in Soil						
Our Reference		303082-17	303082-18	303082-19	303082-20	303082-21
Your Reference	UNITS	TP113	TP114	TP115	TP116	TP116
Depth		0.1-0.2	0.5-0.6	0.5-0.6	0.1-0.2	3-3.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	80	79	77	81	80

svTRH (C10-C40) in Soil						
Our Reference		303082-22	303082-24	303082-25	303082-26	303082-27
Your Reference	UNITS	TP117	TP118	TP119	TP119	TP120
Depth		0.1-0.2	1-1.1	0.1-0.2	2.7-2.8	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	79	73	76	75	75

svTRH (C10-C40) in Soil						
Our Reference		303082-28	303082-29	303082-31	303082-32	303082-33
Your Reference	UNITS	TP120	TP121	TP122	TP123	TP124
Depth		1.5-1.6	0.1-0.2	1-1.1	1-1.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	74	74	74	75	73

svTRH (C10-C40) in Soil						
Our Reference		303082-34	303082-35	303082-36	303082-37	303082-38
Your Reference	UNITS	TP125	TP126	TP127	TP128	TP129
Depth		1.5-1.6	0.1-0.2	0.5-0.6	0.1-0.2	1-1.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	73	73	74	75	91

svTRH (C10-C40) in Soil						
Our Reference		303082-40	303082-41	303082-42	303082-43	303082-44
Your Reference	UNITS	TP130	TP131	TP131	TP132	TP133
Depth		0.5-0.6	0.1-0.2	3-3.1	2-2.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	72	73	73	71	72

PAHs in Soil						
Our Reference		303082-1	303082-2	303082-3	303082-4	303082-5
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.2	1.9-2	0.1-0.2	6.9-7	1.9-2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	22/08/2022	22/08/2022	19/08/2022	22/08/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	86	86	85	93	84

PAHs in Soil						
Our Reference		303082-6	303082-7	303082-8	303082-9	303082-10
Your Reference	UNITS	BH104	BH104	BH105	BH106	BH107
Depth		0.4-0.5	2.7-3	0..1-0.2	0.4-0.5	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	22/08/2022	19/08/2022	22/08/2022	19/08/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	95	84	93	84	91

PAHs in Soil						
Our Reference		303082-11	303082-12	303082-13	303082-14	303082-15
Your Reference	UNITS	BD108082022	BH108	TP109	TP110	TP111
Depth		-	3.9-4	0.1-0.2	2-2.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022	19/08/2022	19/08/2022	22/08/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	86	82	92	102	84

PAHs in Soil						
Our Reference		303082-16	303082-17	303082-18	303082-19	303082-20
Your Reference	UNITS	TP112	TP113	TP114	TP115	TP116
Depth		1.5-1.6	0.1-0.2	0.5-0.6	0.5-0.6	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	22/08/2022	19/08/2022	19/08/2022	22/08/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	90	82	87	90	87

PAHs in Soil						
Our Reference		303082-21	303082-22	303082-23	303082-24	303082-25
Your Reference	UNITS	TP116	TP117	BD06	TP118	TP119
Depth		3-3.1	0.1-0.2	-	1-1.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	19/08/2022	22/08/2022	19/08/2022	22/08/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	83	88	85	87	84

PAHs in Soil						
Our Reference		303082-26	303082-27	303082-28	303082-29	303082-30
Your Reference	UNITS	TP119	TP120	TP120	TP121	BD07
Depth		2.7-2.8	0.1-0.2	1.5-1.6	0.1-0.2	-
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022	19/08/2022	19/08/2022	22/08/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	82	83	88	85	83

PAHs in Soil						
Our Reference		303082-31	303082-32	303082-33	303082-34	303082-35
Your Reference	UNITS	TP122	TP123	TP124	TP125	TP126
Depth		1-1.1	1-1.1	0.1-0.2	1.5-1.6	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	19/08/2022	22/08/2022	19/08/2022	22/08/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	81	89	83	82	82

PAHs in Soil						
Our Reference		303082-36	303082-37	303082-38	303082-39	303082-40
Your Reference	UNITS	TP127	TP128	TP129	BD04	TP130
Depth		0.5-0.6	0.1-0.2	1-1.1	-	0.5-0.6
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	19/08/2022	22/08/2022	22/08/2022	22/08/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	81	79	80	79	82

PAHs in Soil					
Our Reference		303082-41	303082-42	303082-43	303082-44
Your Reference	UNITS	TP131	TP131	TP132	TP133
Depth		0.1-0.2	3-3.1	2-2.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	19/08/2022	22/08/2022	22/08/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	78	86	78	81

Organochlorine Pesticides in soil						
Our Reference		303082-1	303082-4	303082-6	303082-8	303082-10
Your Reference	UNITS	BH101	BH102	BH104	BH105	BH107
Depth		0.1-0.2	6.9-7	0.4-0.5	0..1-0.2	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	97	95	95	91

Organochlorine Pesticides in soil						
Our Reference		303082-13	303082-14	303082-16	303082-18	303082-19
Your Reference	UNITS	TP109	TP110	TP112	TP114	TP115
Depth		0.1-0.2	2-2.1	1.5-1.6	0.5-0.6	0.5-0.6
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	104	93	88	91

Organochlorine Pesticides in soil						
Our Reference		303082-22	303082-24	303082-28	303082-29	303082-32
Your Reference	UNITS	TP117	TP118	TP120	TP121	TP123
Depth		0.1-0.2	1-1.1	1.5-1.6	0.1-0.2	1-1.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	90	91	85	89

Organochlorine Pesticides in soil				
Our Reference		303082-34	303082-37	303082-42
Your Reference	UNITS	TP125	TP128	TP131
Depth		1.5-1.6	0.1-0.2	3-3.1
Type of sample		Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	80	87

Organophosphorus Pesticides in Soil						
Our Reference		303082-1	303082-4	303082-6	303082-8	303082-10
Your Reference	UNITS	BH101	BH102	BH104	BH105	BH107
Depth		0.1-0.2	6.9-7	0.4-0.5	0..1-0.2	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	97	95	95	91

Organophosphorus Pesticides in Soil						
Our Reference		303082-13	303082-14	303082-16	303082-18	303082-19
Your Reference	UNITS	TP109	TP110	TP112	TP114	TP115
Depth		0.1-0.2	2-2.1	1.5-1.6	0.5-0.6	0.5-0.6
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	104	93	88	91

Organophosphorus Pesticides in Soil						
Our Reference		303082-22	303082-24	303082-28	303082-29	303082-32
Your Reference	UNITS	TP117	TP118	TP120	TP121	TP123
Depth		0.1-0.2	1-1.1	1.5-1.6	0.1-0.2	1-1.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	90	91	85	89

Organophosphorus Pesticides in Soil				
Our Reference		303082-34	303082-37	303082-42
Your Reference	UNITS	TP125	TP128	TP131
Depth		1.5-1.6	0.1-0.2	3-3.1
Type of sample		Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	80	87

PCBs in Soil						
Our Reference		303082-1	303082-4	303082-6	303082-8	303082-10
Your Reference	UNITS	BH101	BH102	BH104	BH105	BH107
Depth		0.1-0.2	6.9-7	0.4-0.5	0..1-0.2	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	97	95	95	91

PCBs in Soil						
Our Reference		303082-13	303082-14	303082-16	303082-18	303082-19
Your Reference	UNITS	TP109	TP110	TP112	TP114	TP115
Depth		0.1-0.2	2-2.1	1.5-1.6	0.5-0.6	0.5-0.6
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	104	93	88	91

PCBs in Soil						
Our Reference		303082-22	303082-24	303082-28	303082-29	303082-32
Your Reference	UNITS	TP117	TP118	TP120	TP121	TP123
Depth		0.1-0.2	1-1.1	1.5-1.6	0.1-0.2	1-1.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	90	91	85	89

PCBs in Soil				
Our Reference		303082-34	303082-37	303082-42
Your Reference	UNITS	TP125	TP128	TP131
Depth		1.5-1.6	0.1-0.2	3-3.1
Type of sample		Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	80	87

Acid Extractable metals in soil						
Our Reference		303082-1	303082-2	303082-3	303082-4	303082-5
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.2	1.9-2	0.1-0.2	6.9-7	1.9-2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Arsenic	mg/kg	8	5	9	6	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	21	15	17	15
Copper	mg/kg	20	8	14	16	6
Lead	mg/kg	19	11	15	14	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	4	6	8	4
Zinc	mg/kg	41	16	27	32	22

Acid Extractable metals in soil						
Our Reference		303082-6	303082-7	303082-8	303082-9	303082-10
Your Reference	UNITS	BH104	BH104	BH105	BH106	BH107
Depth		0.4-0.5	2.7-3	0..1-0.2	0.4-0.5	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Arsenic	mg/kg	5	8	7	6	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	21	12	12	14
Copper	mg/kg	22	9	11	11	14
Lead	mg/kg	16	15	26	13	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	6	6	4	7
Zinc	mg/kg	36	16	26	18	31

Acid Extractable metals in soil						
Our Reference		303082-11	303082-12	303082-13	303082-14	303082-15
Your Reference	UNITS	BD108082022	BH108	TP109	TP110	TP111
Depth		-	3.9-4	0.1-0.2	2-2.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Arsenic	mg/kg	9	9	8	<4	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	18	26	15	6	15
Copper	mg/kg	19	15	20	6	17
Lead	mg/kg	18	17	17	8	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	9	10	2	8
Zinc	mg/kg	37	27	41	10	33

Acid Extractable metals in soil						
Our Reference		303082-16	303082-17	303082-18	303082-19	303082-20
Your Reference	UNITS	TP112	TP113	TP114	TP115	TP116
Depth		1.5-1.6	0.1-0.2	0.5-0.6	0.5-0.6	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Arsenic	mg/kg	8	6	11	<4	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	15	10	5	20
Copper	mg/kg	11	7	11	6	20
Lead	mg/kg	13	12	18	6	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	4	7	4	10
Zinc	mg/kg	25	16	23	14	48

Acid Extractable metals in soil						
Our Reference		303082-21	303082-22	303082-23	303082-24	303082-25
Your Reference	UNITS	TP116	TP117	BD06	TP118	TP119
Depth		3-3.1	0.1-0.2	-	1-1.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Arsenic	mg/kg	8	7	7	4	10
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	16	14	8	16
Copper	mg/kg	15	14	15	8	20
Lead	mg/kg	16	18	16	9	40
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	7	7	3	10
Zinc	mg/kg	26	30	32	12	42

Acid Extractable metals in soil						
Our Reference		303082-26	303082-27	303082-28	303082-29	303082-30
Your Reference	UNITS	TP119	TP120	TP120	TP121	BD07
Depth		2.7-2.8	0.1-0.2	1.5-1.6	0.1-0.2	-
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Arsenic	mg/kg	4	8	<4	7	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	18	3	18	17
Copper	mg/kg	10	16	<1	20	19
Lead	mg/kg	17	17	5	18	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	7	<1	8	8
Zinc	mg/kg	20	36	3	40	39

Acid Extractable metals in soil						
Our Reference		303082-31	303082-32	303082-33	303082-34	303082-35
Your Reference	UNITS	TP122	TP123	TP124	TP125	TP126
Depth		1-1.1	1-1.1	0.1-0.2	1.5-1.6	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Arsenic	mg/kg	5	5	7	<4	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	12	15	8	18
Copper	mg/kg	13	6	15	4	22
Lead	mg/kg	12	11	17	10	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	4	8	3	7
Zinc	mg/kg	19	14	33	11	41

Acid Extractable metals in soil						
Our Reference		303082-36	303082-37	303082-38	303082-39	303082-40
Your Reference	UNITS	TP127	TP128	TP129	BD04	TP130
Depth		0.5-0.6	0.1-0.2	1-1.1	-	0.5-0.6
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Arsenic	mg/kg	6	6	5	<4	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	12	11	10	5
Copper	mg/kg	14	14	18	7	2
Lead	mg/kg	13	13	14	10	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	6	8	4	1
Zinc	mg/kg	29	29	35	16	5

Acid Extractable metals in soil					
Our Reference		303082-41	303082-42	303082-43	303082-44
Your Reference	UNITS	TP131	TP131	TP132	TP133
Depth		0.1-0.2	3-3.1	2-2.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Arsenic	mg/kg	7	<4	5	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	8	10	13
Copper	mg/kg	20	10	11	16
Lead	mg/kg	17	10	11	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	3	5	9
Zinc	mg/kg	38	12	16	37

Misc Soil - Inorg						
Our Reference		303082-1	303082-4	303082-6	303082-8	303082-10
Your Reference	UNITS	BH101	BH102	BH104	BH105	BH107
Depth		0.1-0.2	6.9-7	0.4-0.5	0..1-0.2	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		303082-13	303082-14	303082-16	303082-18	303082-19
Your Reference	UNITS	TP109	TP110	TP112	TP114	TP115
Depth		0.1-0.2	2-2.1	1.5-1.6	0.5-0.6	0.5-0.6
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		303082-22	303082-24	303082-28	303082-29	303082-32
Your Reference	UNITS	TP117	TP118	TP120	TP121	TP123
Depth		0.1-0.2	1-1.1	1.5-1.6	0.1-0.2	1-1.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg				
Our Reference		303082-34	303082-37	303082-42
Your Reference	UNITS	TP125	TP128	TP131
Depth		1.5-1.6	0.1-0.2	3-3.1
Type of sample		Soil	Soil	Soil
Date prepared	-	18/08/2022	18/08/2022	18/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Moisture						
Our Reference		303082-1	303082-2	303082-3	303082-4	303082-5
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.2	1.9-2	0.1-0.2	6.9-7	1.9-2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Moisture	%	16	12	10	12	11

Moisture						
Our Reference		303082-6	303082-7	303082-8	303082-9	303082-10
Your Reference	UNITS	BH104	BH104	BH105	BH106	BH107
Depth		0.4-0.5	2.7-3	0..1-0.2	0.4-0.5	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Moisture	%	9.5	15	11	12	12

Moisture						
Our Reference		303082-11	303082-12	303082-13	303082-14	303082-15
Your Reference	UNITS	BD108082022	BH108	TP109	TP110	TP111
Depth		-	3.9-4	0.1-0.2	2-2.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Moisture	%	12	16	14	14	18

Moisture						
Our Reference		303082-16	303082-17	303082-18	303082-19	303082-20
Your Reference	UNITS	TP112	TP113	TP114	TP115	TP116
Depth		1.5-1.6	0.1-0.2	0.5-0.6	0.5-0.6	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Moisture	%	13	13	12	13	19

Moisture						
Our Reference		303082-21	303082-22	303082-23	303082-24	303082-25
Your Reference	UNITS	TP116	TP117	BD06	TP118	TP119
Depth		3-3.1	0.1-0.2	-	1-1.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Moisture	%	11	16	16	14	15

Moisture						
Our Reference		303082-26	303082-27	303082-28	303082-29	303082-30
Your Reference	UNITS	TP119	TP120	TP120	TP121	BD07
Depth		2.7-2.8	0.1-0.2	1.5-1.6	0.1-0.2	-
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Moisture	%	14	13	6.1	13	9.2

Moisture						
Our Reference		303082-31	303082-32	303082-33	303082-34	303082-35
Your Reference	UNITS	TP122	TP123	TP124	TP125	TP126
Depth		1-1.1	1-1.1	0.1-0.2	1.5-1.6	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Moisture	%	12	12	8.3	7.9	10

Moisture						
Our Reference		303082-36	303082-37	303082-38	303082-39	303082-40
Your Reference	UNITS	TP127	TP128	TP129	BD04	TP130
Depth		0.5-0.6	0.1-0.2	1-1.1	-	0.5-0.6
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Moisture	%	9.5	9.9	9.0	6.9	10

Moisture					
Our Reference		303082-41	303082-42	303082-43	303082-44
Your Reference	UNITS	TP131	TP131	TP132	TP133
Depth		0.1-0.2	3-3.1	2-2.1	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	18/08/2022	18/08/2022	18/08/2022	18/08/2022
Moisture	%	11	12	8.9	9.6

Asbestos ID - soils						
Our Reference		303082-1	303082-2	303082-3	303082-4	303082-5
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.2	1.9-2	0.1-0.2	6.9-7	1.9-2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 35g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		303082-6	303082-8	303082-9	303082-10	303082-12
Your Reference	UNITS	BH104	BH105	BH106	BH107	BH108
Depth		0.4-0.5	0..1-0.2	0.4-0.5	0.1-0.2	3.9-4
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Sample mass tested	g	Approx. 35g	Approx. 35g	Approx. 35g	Approx. 40g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		303082-13	303082-14	303082-15	303082-16	303082-17
Your Reference	UNITS	TP109	TP110	TP111	TP112	TP113
Depth		0.1-0.2	2-2.1	0.1-0.2	1.5-1.6	0.1-0.2
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Sample mass tested	g	Approx. 35g	Approx. 40g	Approx. 30g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		303082-18	303082-19	303082-20	303082-22	303082-24
Your Reference	UNITS	TP114	TP115	TP116	TP117	TP118
Depth		0.5-0.6	0.5-0.6	0.1-0.2	0.1-0.2	1-1.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Sample mass tested	g	Approx. 35g	Approx. 35g	Approx. 30g	Approx. 35g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		303082-25	303082-27	303082-28	303082-29	303082-31
Your Reference	UNITS	TP119	TP120	TP120	TP121	TP122
Depth		0.1-0.2	0.1-0.2	1.5-1.6	0.1-0.2	1-1.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Sample mass tested	g	Approx. 35g	Approx. 35g	Approx. 35g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Beige coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		303082-32	303082-33	303082-34	303082-35	303082-36
Your Reference	UNITS	TP123	TP124	TP125	TP126	TP127
Depth		1-1.1	0.1-0.2	1.5-1.6	0.1-0.2	0.5-0.6
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 40g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		303082-37	303082-38	303082-40	303082-41	303082-42
Your Reference	UNITS	TP128	TP129	TP130	TP131	TP131
Depth		0.1-0.2	1-1.1	0.5-0.6	0.1-0.2	3-3.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 40g	Approx. 35g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils			
Our Reference		303082-43	303082-44
Your Reference	UNITS	TP132	TP133
Depth		2-2.1	0.1-0.2
Type of sample		Soil	Soil
Date analysed	-	22/08/2022	22/08/2022
Sample mass tested	g	Approx. 40g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected

Misc Inorg - Soil				
Our Reference		303082-13	303082-29	303082-44
Your Reference	UNITS	TP109	TP121	TP133
Depth		0.1-0.2	0.1-0.2	0.1-0.2
Type of sample		Soil	Soil	Soil
Date prepared	-	22/08/2022	22/08/2022	22/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022
pH 1:5 soil:water	pH Units	7.0	7.6	7.7

CEC				
Our Reference		303082-13	303082-29	303082-44
Your Reference	UNITS	TP109	TP121	TP133
Depth		0.1-0.2	0.1-0.2	0.1-0.2
Type of sample		Soil	Soil	Soil
Date prepared	-	23/08/2022	23/08/2022	23/08/2022
Date analysed	-	23/08/2022	23/08/2022	23/08/2022
Exchangeable Ca	meq/100g	6.3	13	6.5
Exchangeable K	meq/100g	0.2	0.4	0.2
Exchangeable Mg	meq/100g	3.0	3.1	2.5
Exchangeable Na	meq/100g	0.4	0.4	0.4
Cation Exchange Capacity	meq/100g	10	17	9.6

Triazine Herbicides in Soil						
Our Reference		303082-13	303082-17	303082-29	303082-40	303082-42
Your Reference	UNITS	TP109	TP113	TP121	TP130	TP131
Depth		0.1-0.2	0.1-0.2	0.1-0.2	0.5-0.6	3-3.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	17/08/2022	17/08/2022	17/08/2022	17/08/2022	17/08/2022
Date analysed	-	22/08/2022	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Simazine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Atrazine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Propazine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Terbuthylazine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Metribuzin	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ametryn	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Prometryn	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Terbutryn	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Cyanazine	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Irgarol	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Hexazinone	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	82	85	84	84	86

Triazine Herbicides in Soil		
Our Reference		303082-44
Your Reference	UNITS	TP133
Depth		0.1-0.2
Type of sample		Soil
Date extracted	-	17/08/2022
Date analysed	-	22/08/2022
Simazine	mg/kg	<0.5
Atrazine	mg/kg	<0.5
Propazine	mg/kg	<0.5
Terbuthylazine	mg/kg	<0.5
Metribuzin	mg/kg	<0.5
Ametryn	mg/kg	<0.5
Prometryn	mg/kg	<0.5
Terbutryn	mg/kg	<0.5
Cyanazine	mg/kg	<0.5
Irgarol	mg/kg	<0.5
Hexazinone	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	81

Phenoxy Acid Herbicides in Soil						
Our Reference		303082-13	303082-17	303082-29	303082-40	303082-42
Your Reference	UNITS	TP109	TP113	TP121	TP130	TP131
Depth		0.1-0.2	0.1-0.2	0.1-0.2	0.5-0.6	3-3.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Date analysed	-	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Clopyralid	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3,5-Dichlorobenzoic acid	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
o-chlorophenoxy acetic acid	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-CPA	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dicamba	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
MCPP	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
MCPA	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorprop	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-D	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoxynil	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Triclopyr	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-TP	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-T	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
MCPB	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dinoseb	mg/kg	<1	<1	<1	<1	<1
2,4-DB	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ioxynil	mg/kg	<1	<1	<1	<1	<1
Picloram	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
DCPA (Chlorthal) Diacid	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acifluorfen	mg/kg	<2	<2	<2	<2	<2
2,4,6-T	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-D	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluroxypyr	mg/kg	<1	<1	<1	<1	<1
Chloramben	mg/kg	<1	<1	<1	<1	<1
Bentazon	mg/kg	<1	<1	<1	<1	<1
Surrogate 2.4- DCPA	%	93	86	86	92	79

Phenoxy Acid Herbicides in Soil		
Our Reference		303082-44
Your Reference	UNITS	TP133
Depth		0.1-0.2
Type of sample		Soil
Date extracted	-	19/08/2022
Date analysed	-	19/08/2022
Clopyralid	mg/kg	<0.5
3,5-Dichlorobenzoic acid	mg/kg	<0.5
o-chlorophenoxy acetic acid	mg/kg	<0.5
4-CPA	mg/kg	<0.5
Dicamba	mg/kg	<0.5
MCPP	mg/kg	<0.5
MCPA	mg/kg	<0.5
Dichlorprop	mg/kg	<0.5
2,4-D	mg/kg	<0.5
Bromoxynil	mg/kg	<0.5
Triclopyr	mg/kg	<0.5
2,4,5-TP	mg/kg	<0.5
2,4,5-T	mg/kg	<0.5
MCPB	mg/kg	<0.5
Dinoseb	mg/kg	<1
2,4-DB	mg/kg	<0.5
Ioxynil	mg/kg	<1
Picloram	mg/kg	<0.5
DCPA (Chlorthal) Diacid	mg/kg	<0.5
Acifluorfen	mg/kg	<2
2,4,6-T	mg/kg	<0.5
2,6-D	mg/kg	<0.5
Fluroxypyr	mg/kg	<1
Chloramben	mg/kg	<1
Bentazon	mg/kg	<1
Surrogate 2.4- DCPA	%	93

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Ext-054	Analysed by MPL Envirolab
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	303082-4
Date extracted	-			19/08/2022	1	17/08/2022	17/08/2022		19/08/2022	17/08/2022
Date analysed	-			23/08/2022	1	22/08/2022	22/08/2022		23/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	105	82
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	105	82
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	113	84
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	95	76
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	101	80
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	108	84
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	110	84
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	85	1	92	88	4	98	88

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	303082-24
Date extracted	-			[NT]	13	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	13	23/08/2022	23/08/2022		22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	13	<25	<25	0	97	89
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	13	<25	<25	0	97	89
Benzene	mg/kg	0.2	Org-023	[NT]	13	<0.2	<0.2	0	98	89
Toluene	mg/kg	0.5	Org-023	[NT]	13	<0.5	<0.5	0	90	81
Ethylbenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	95	89
m+p-xylene	mg/kg	2	Org-023	[NT]	13	<2	<2	0	102	94
o-Xylene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	104	96
Naphthalene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	13	101	84	18	99	93

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	303082-42
Date extracted	-			[NT]	22	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	22	22/08/2022	22/08/2022		22/08/2022	22/08/2022
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	22	<25	<25	0	100	91
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	22	<25	<25	0	100	91
Benzene	mg/kg	0.2	Org-023	[NT]	22	<0.2	<0.2	0	106	94
Toluene	mg/kg	0.5	Org-023	[NT]	22	<0.5	<0.5	0	96	86
Ethylbenzene	mg/kg	1	Org-023	[NT]	22	<1	<1	0	95	87
m+p-xylene	mg/kg	2	Org-023	[NT]	22	<2	<2	0	102	93
o-Xylene	mg/kg	1	Org-023	[NT]	22	<1	<1	0	104	95
Naphthalene	mg/kg	1	Org-023	[NT]	22	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	22	109	93	16	105	100

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	29	22/08/2022	22/08/2022		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	29	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	29	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	29	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	29	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	29	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	29	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	29	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	29	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	29	116	95	20	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	37	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	37	22/08/2022	22/08/2022		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	37	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	37	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	37	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	37	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	37	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	37	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	37	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	37	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	37	93	96	3	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	303082-4
Date extracted	-			17/08/2022	1	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			19/08/2022	1	19/08/2022	19/08/2022		19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	110	114
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	106	85
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	100	80
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	110	114
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	106	85
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	100	80
Surrogate o-Terphenyl	%		Org-020	74	1	80	81	1	84	81

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	303082-24
Date extracted	-			[NT]	13	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	13	19/08/2022	19/08/2022		19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	13	<50	<50	0	102	103
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	99	82
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	86	82
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	13	<50	<50	0	102	103
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	99	82
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	86	82
Surrogate o-Terphenyl	%		Org-020	[NT]	13	79	79	0	99	73

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	303082-42
Date extracted	-			[NT]	22	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	22	19/08/2022	19/08/2022		19/08/2022	19/08/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	22	<50	<50	0	109	102
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	22	<100	<100	0	86	80
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	22	<100	<100	0	114	93
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	22	<50	<50	0	109	102
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	22	<100	<100	0	86	80
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	22	<100	<100	0	114	93
Surrogate o-Terphenyl	%		Org-020	[NT]	22	79	85	7	115	73

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	29	19/08/2022	19/08/2022		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	29	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	29	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	29	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	29	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	29	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	29	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	29	74	74	0	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	37	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	37	19/08/2022	19/08/2022		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	37	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	37	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	37	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	37	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	37	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	37	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	37	75	73	3	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	303082-4
Date extracted	-			17/08/2022	1	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			19/08/2022	1	19/08/2022	19/08/2022		19/08/2022	19/08/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	101
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	89	95
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	99
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	110
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	100
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	109
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	93	99
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	92	106
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	82	1	86	83	4	85	94

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	303082-24
Date extracted	-			[NT]	13	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	13	19/08/2022	19/08/2022		22/08/2022	19/08/2022
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	93	86
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	91	85
Fluorene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	92	88
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	106	98
Anthracene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	94	88
Pyrene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	101	95
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	89	89
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	13	<0.05	<0.05	0	94	92
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	13	92	94	2	92	84

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	303082-42
Date extracted	-			[NT]	22	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	22	19/08/2022	19/08/2022		22/08/2022	19/08/2022
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	88	92
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	86	89
Fluorene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	92	93
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	99	100
Anthracene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	87	92
Pyrene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	94	99
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	117	91
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	22	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	22	<0.05	<0.05	0	93	94
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	22	88	95	8	85	88

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	29	19/08/2022	19/08/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	29	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	29	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	29	85	84	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	37	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	37	19/08/2022	19/08/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	37	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	37	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	37	79	84	6	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	303082-4
Date extracted	-			17/08/2022	1	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			19/08/2022	1	19/08/2022	19/08/2022		19/08/2022	19/08/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	100
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	85	103
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	93	103
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	111
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	108
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	107
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.2	0	96	104
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	100
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	98
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	82
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	86	1	91	87	4	87	95

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	303082-24
Date extracted	-			[NT]	13	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	13	19/08/2022	19/08/2022		22/08/2022	19/08/2022
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	92	86
HCB	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	88	89
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	71	83
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	88	95
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	86	93
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	90	92
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	92	91
Endrin	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	91	79
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	88	84
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	79	81
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	13	90	94	4	77	84

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	303082-42
Date extracted	-			[NT]	22	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	22	19/08/2022	19/08/2022		22/08/2022	19/08/2022
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	90	90
HCB	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	86	92
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	79	89
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	82	99
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	84	100
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	86	98
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	90	93
Endrin	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	84	86
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	86	88
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	82	100
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	22	89	94	5	88	88

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	29	19/08/2022	19/08/2022		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	29	85	88	3	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	37	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	37	19/08/2022	19/08/2022		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	37	80	85	6	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	303082-4
Date extracted	-			17/08/2022	1	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			19/08/2022	1	19/08/2022	19/08/2022		19/08/2022	19/08/2022
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	123
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	85	93
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	83	79
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	101
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	106
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	103
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	90
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	86	1	91	87	4	87	95

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	303082-24
Date extracted	-			[NT]	13	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	13	19/08/2022	19/08/2022		22/08/2022	19/08/2022
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	88	101
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	86	79
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	88	75
Malathion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	94	79
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	89	92
Parathion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	96	84
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	82	72
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	13	90	94	4	77	84

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	303082-42
Date extracted	-			[NT]	22	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	22	19/08/2022	19/08/2022		22/08/2022	19/08/2022
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	110	93
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	84	85
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	84	83
Malathion	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	91	85
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	90	96
Parathion	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	88	89
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	81	78
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	22	89	94	5	88	88

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	29	19/08/2022	19/08/2022		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	29	85	88	3	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	37	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	37	19/08/2022	19/08/2022		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	37	80	85	6	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	303082-4
Date extracted	-			17/08/2022	1	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			19/08/2022	1	19/08/2022	19/08/2022		19/08/2022	19/08/2022
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	117	104
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	86	1	91	87	4	87	95

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	303082-24
Date extracted	-			[NT]	13	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	13	19/08/2022	19/08/2022		22/08/2022	19/08/2022
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	110	102
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	13	90	94	4	77	84

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	303082-42
Date extracted	-			[NT]	22	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			[NT]	22	19/08/2022	19/08/2022		22/08/2022	19/08/2022
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	22	<0.1	<0.1	0	88	120
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	22	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	22	89	94	5	88	88

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	29	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	29	19/08/2022	19/08/2022		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	29	85	88	3	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	37	17/08/2022	17/08/2022		[NT]	[NT]
Date analysed	-			[NT]	37	19/08/2022	19/08/2022		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	37	80	85	6	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	303082-4
Date prepared	-			19/08/2022	1	19/08/2022	19/08/2022		19/08/2022	19/08/2022
Date analysed	-			22/08/2022	1	22/08/2022	22/08/2022		22/08/2022	22/08/2022
Arsenic	mg/kg	4	Metals-020	<4	1	8	8	0	101	80
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	93	81
Chromium	mg/kg	1	Metals-020	<1	1	16	19	17	105	86
Copper	mg/kg	1	Metals-020	<1	1	20	19	5	97	94
Lead	mg/kg	1	Metals-020	<1	1	19	18	5	92	72
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	117	99
Nickel	mg/kg	1	Metals-020	<1	1	9	8	12	101	78
Zinc	mg/kg	1	Metals-020	<1	1	41	36	13	93	71

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	303082-24
Date prepared	-			[NT]	13	19/08/2022	19/08/2022		19/08/2022	19/08/2022
Date analysed	-			[NT]	13	22/08/2022	22/08/2022		22/08/2022	22/08/2022
Arsenic	mg/kg	4	Metals-020	[NT]	13	8	8	0	102	84
Cadmium	mg/kg	0.4	Metals-020	[NT]	13	<0.4	<0.4	0	93	75
Chromium	mg/kg	1	Metals-020	[NT]	13	15	17	12	104	89
Copper	mg/kg	1	Metals-020	[NT]	13	20	19	5	93	90
Lead	mg/kg	1	Metals-020	[NT]	13	17	17	0	91	79
Mercury	mg/kg	0.1	Metals-021	[NT]	13	<0.1	<0.1	0	96	92
Nickel	mg/kg	1	Metals-020	[NT]	13	10	8	22	100	81
Zinc	mg/kg	1	Metals-020	[NT]	13	41	38	8	95	78

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	303082-42
Date prepared	-			[NT]	22	19/08/2022	19/08/2022		19/08/2022	19/08/2022
Date analysed	-			[NT]	22	22/08/2022	22/08/2022		22/08/2022	22/08/2022
Arsenic	mg/kg	4	Metals-020	[NT]	22	7	8	13	104	86
Cadmium	mg/kg	0.4	Metals-020	[NT]	22	<0.4	<0.4	0	96	76
Chromium	mg/kg	1	Metals-020	[NT]	22	16	14	13	107	92
Copper	mg/kg	1	Metals-020	[NT]	22	14	14	0	95	96
Lead	mg/kg	1	Metals-020	[NT]	22	18	15	18	92	80
Mercury	mg/kg	0.1	Metals-021	[NT]	22	<0.1	<0.1	0	94	86
Nickel	mg/kg	1	Metals-020	[NT]	22	7	6	15	102	87
Zinc	mg/kg	1	Metals-020	[NT]	22	30	28	7	97	96

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	29	19/08/2022	19/08/2022		[NT]	[NT]
Date analysed	-			[NT]	29	22/08/2022	22/08/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	29	7	8	13	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	29	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	29	18	22	20	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	29	20	22	10	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	29	18	19	5	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	29	8	8	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	29	40	45	12	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	37	19/08/2022	19/08/2022		[NT]	[NT]
Date analysed	-			[NT]	37	22/08/2022	22/08/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	37	6	6	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	37	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	37	12	13	8	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	37	14	15	7	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	37	13	14	7	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	37	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	37	6	6	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	37	29	30	3	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	303082-4
Date prepared	-			18/08/2022	1	18/08/2022	18/08/2022		18/08/2022	18/08/2022
Date analysed	-			18/08/2022	1	18/08/2022	18/08/2022		18/08/2022	18/08/2022
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	106	103

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	22	18/08/2022	18/08/2022		[NT]	[NT]
Date analysed	-			[NT]	22	18/08/2022	18/08/2022		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	22	<5	<5	0	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			22/08/2022	[NT]	[NT]	[NT]	[NT]	22/08/2022	[NT]
Date analysed	-			22/08/2022	[NT]	[NT]	[NT]	[NT]	22/08/2022	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			23/08/2022	[NT]	[NT]	[NT]	[NT]	23/08/2022	[NT]
Date analysed	-			23/08/2022	[NT]	[NT]	[NT]	[NT]	23/08/2022	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: Triazine Herbicides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	303082-42
Date extracted	-			17/08/2022	13	17/08/2022	17/08/2022		17/08/2022	17/08/2022
Date analysed	-			22/08/2022	13	22/08/2022	22/08/2022		22/08/2022	22/08/2022
Simazine	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Atrazine	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	102	98
Propazine	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	106	99
Terbuthylazine	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Metribuzin	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Ametryn	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Prometryn	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	103	93
Terbutryn	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Cyanazine	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Irgarol	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Hexazinone	mg/kg	0.5	Org-022/025	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	86	13	82	85	4	94	86

QUALITY CONTROL: Phenoxy Acid Herbicides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	303082-17
Date extracted	-			19/08/2022	13	19/08/2022	19/08/2022		19/08/2022	19/08/2022
Date analysed	-			19/08/2022	13	19/08/2022	19/08/2022		19/08/2022	19/08/2022
Clopyralid	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
3,5-Dichlorobenzoic acid	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
o-chlorophenoxy acetic acid	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
4-CPA	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Dicamba	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	102	112
MCPP	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	99	111
MCPA	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	95	106
Dichlorprop	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
2,4-D	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	97	104
Bromoxynil	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Triclopyr	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
2,4,5-TP	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
2,4,5-T	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	96	106
MCPB	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Dinoseb	mg/kg	1	Ext-054	<1	13	<1	<1	0	[NT]	[NT]
2,4-DB	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Ioxynil	mg/kg	1	Ext-054	<1	13	<1	<1	0	[NT]	[NT]
Picloram	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
DCPA (Chlorthal) Diacid	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Acifluorfen	mg/kg	2	Ext-054	<2	13	<2	<2	0	[NT]	[NT]
2,4,6-T	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
2,6-D	mg/kg	0.5	Ext-054	<0.5	13	<0.5	<0.5	0	[NT]	[NT]
Fluroxypyr	mg/kg	1	Ext-054	<1	13	<1	<1	0	[NT]	[NT]
Chloramben	mg/kg	1	Ext-054	<1	13	<1	<1	0	[NT]	[NT]
Bentazon	mg/kg	1	Ext-054	<1	13	<1	<1	0	[NT]	[NT]
Surrogate 2.4- DCPA	%		Ext-054	87	13	93	90	3	88	89

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-001 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.
Note: Samples were sub-sampled from jars provided by the client.

Phenoxy Acid Herbicides analysed by MPL Laboratories. Report No. PDH1003

Douglas Partners
Geotechnics / Environment / Groundwater

updated

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	216255.01	**Suburb:**	Box Hill	**To:**	Lab name
Project Manager:	Celine Li	**Order Number:**		**Sampler:**	VV		Lab address
Email:	celine.li@douglaspartners.com.au					**Attn:**	Name
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day						Lab phone Lab email
Prior Storage:	☑ Fridge ☐ Freezer ☐ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes	(If YES, then handle, transport and store in accordance with FPM HAZID)			

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo8a	Combo3	Herbicides	Combo3a	HM&PAH	pH&CEC					Notes/ Preservation/ Additional Requirements
1	BH101	0.1	0.2		S	G	X										
2	BH101	1.9	2		S	G				X							
3	BH102	0.1	0.2		S	G				X							
4	BH102	6.9	7		S	G	X										
5	BH103	1.9	2		S	G				X							353882
6	BH104	0.4	0.5		S	G	X										
7	BH104	2.7	3		S	G		X									
8	BH105	0..1	0.2		S	G	X										
9	BH106	0.4	0.5		S	G				X							
10	BH107	0.1	0.2		S	G	X										
11	BD108082022				S	G					X						
12	BH108	3.9	4		S	G				X							
13	TP109	0.1	0.2		S	G	X		X			X					
14	TP110	2	2.1		S	G	X										
15	TP111	0.1	0.2		S	G				X							
16	TP112	1.5	1.6		S	G	X										

Metals to analyse:			**LAB RECEIPT**
Number of samples in container:	**Transported to laboratory by:**		**Lab Ref. No:**
Send results to:	Douglas Partners Pty Ltd		**Received by:**
Address:	**Phone:**		**Date & Time:**
Relinquished by:	**Date:**	**Signed:**	**Signed:**

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	216255.01	**Suburb:** Box Hill	**To:** Lab name
Project Manager:	Celine Li		**Dispatch date:**

Lab ID	Sample ID			Date Sampled	Sample Type	Container Type	Analytes											Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To		S - soil W - water M -	G - glass P - plastic	Combo8a	Combo3	Herbicides	Combo3a	HM&PAH	pH&CEC						
17	TP113	0.1	0.2		S	G			X	X								
18	TP114	0.5	0.6		S	G	X											
19	TP115	0.5	0.6		S	G	X											
20	TP116	0.1	0.2		S	G				X								
21	TP116	3	3.1		S	G		X										
22	TP117	0.1	0.2		S	G	X											
23	BD06				S	G					X							
24	TP118	1	1.1		S	G	X											
25	TP119	0.1	0.2		S	G				X								
26	TP119	2.7	2.8		S	G		X										
27	TP120	0.1	0.2		S	G				X								
28	TP120	1.5	1.6		S	G	X											
29	TP121	0.1	0.2		S	G	X		X			X						
30	BD07				S	G					X							
ALS	BD07-1				S	G	X											please send to ALS
31	TP122	1	1.1		S	G				X								
32	TP123	1	1.1		S	G	X											
33	TP124	0.1	0.2		S	G				X								
34	TP125	1.5	1.6		S	G	X											
35	TP126	0.1	0.2		S	G				X								

Project No:	216255.01	**Suburb:** Box Hill	**To:** Lab name
Project Manager:	Celine Li		**Dispatch date:**

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Lab ID	Sample ID			Date Sampled	Sample Type	Container Type	Analytes											Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To		S - soil W - water M -	G - glass P - plastic	Combo8a	Combo3	Herbicides	Combo3a	HM&PAH	pH&CEC	BTEX					
36	TP127	0.5	0.6		S	G				X								
37	TP128	0.1	0.2		S	G	X											
38	TP129	1	1.1		S	G				X								
39	BD04				S	G					X							
40	TP130	0.5	0.6		S	G			X	X								
41	TP131	0.1	0.2		S	G				X								
42	TP131	3	3.1		S	G	X		X									
43	TP132	2	2.1		S	G				X								
44	TP133	0.1	0.2		S	G			X	X		X						
45,46	TS/TB												X					

Project No: 216255.01 **Suburb:** Box Hill **To:** Lab name

Project Manager: Celine Li **Dispatch date:**

COC 15/8/2022 1515.

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CHAIN OF CUSTODY DESPATCH SHEET

Project No: 216255.01	**Suburb:** Box Hill		**To:** Lab name
Project Manager: Celine Li	**Order Number:**	**Sampler:**	Lab address
Email:			**Attn:** Name
Turnaround time: ☐ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day			Lab phone Lab email
Prior Storage: ☐ Fridge ☐ Freezer ☐ Esky ☐ Shelf	**Do samples contain 'potential' HBM?** ☐ No ☐ Yes		(If YES, then handle, transport and store in accordance with FPM HAZID)

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo8a	Combo3	PFAS	Combo3a	HM&PAH	pH&CEC					Notes/ Preservation/ Additional Requirements
1	BH101	0.1	0.2		S	G	X										
2	BH101	1.9	2		S	G				X							
3	BH102	0.1	0.2		S	G				X							
4	BH102	6.9	7		S	G	X										
5	BH103	1.9	2		S	G				X							
6	BH104	0.4	0.5		S	G	X										
7	BH104	2.7	3		S	G		X									
8	BH105	0..1	0.2		S	G	X										
9	BH106	0.4	0.5		S	G				X							
10	BH107	0.1	0.2		S	G	X										
11	BD108082022				S	G					X						
12	BH108	3.9	4		S	G				X							
13	TP109	0.1	0.2		S	G	X					X					
14	TP110	2	2.1		S	G	X										
15	TP111	0.1	0.2		S	G				X							
16	TP112	1.5	1.6		S	G	X										

ENVIROLAB
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 303082
Date Received: 15/8/2022
Time Received: 1515
Received By:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:		**LAB RECEIPT**
Number of samples in container:	**Transported to laboratory by:**	**Lab Ref. No:** 303082
Send results to: Douglas Partners Pty Ltd		**Received by:** 15/8/2022
Address:	**Phone:**	**Date & Time:** 1515
Relinquished by:	**Date:** **Signed:**	**Signed:**

COC 15/8/22
Sample 12/8/2022 1700

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No: 0.00				**Suburb:**												**To:** Lab name			
Project Manager:																**Dispatch date:**			
Lab ID	Sample ID			Date Sampled	Sample Type	Container Type	Analytes												Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To		S - soil W - water M -	G - glass P - plastic	Combo8a	Combo3	PFAS	Combo3a	HM&PAH	pH&CEC							
17	TP113	0.1	0.2		S	G				X									
18	TP114	0.5	0.6		S	G	X												
19	TP115	0.5	0.6		S	G	X		X										
20	TP116	0.1	0.2		S	G				X									
21	TP116	3	3.1		S	G		X											
22	TP117	0.1	0.2		S	G	X												
23	BD06				S	G					X								
24	TP118	1	1.1		S	G	X												
25	TP119	0.1	0.2		S	G				X									
26	TP119	2.7	2.8		S	G		X											
27	TP120	0.1	0.2		S	G				X									
28	TP120	1.5	1.6		S	G	X												
29	TP121	0.1	0.2		S	G	X					X							
30	BD07				S	G					X								
ALS	BD07-1				S	G	X												please send to ALS
31	TP122	1	1.1		S	G				X									
32	TP123	1	1.1		S	G	X		X										
33	TP124	0.1	0.2		S	G				X									
34	TP125	1.5	1.6		S	G	X												
35	TP126	0.1	0.2		S	G				X									
Project No: 0.00				**Suburb:**												**To:** Lab name			
Project Manager:																**Dispatch date:**			

Rg 15/8/2022 303082

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CHAIN OF CUSTODY DESPATCH SHEET

Lab ID	Sample ID			Date Sampled	Sample Type	Container Type	Analytes											Notes/ Preservation/ Additional Requirements
	Location / Other ID	Depth From	Depth To		S - soil W - water M -	G - glass P - plastic	Combo8a	Combo3	PFAS	Combo3a	HM&PAH	pH&CEC	BTEX					
36	TP127	0.5	0.6		S	G				X								
37	TP128	0.1	0.2		S	G	X											
38	TP129	1	1.1		S	G				X								
39	BD04				S	G					X							
40	TP130	0.5	0.6		S	G				X								
41	TP131	0.1	0.2		S	G			X	X								
42	TP131	3	3.1		S	G	X		X									
43	TP132	2	2.1		S	G				X								
44	TP133	0.1	0.2		S	G				X		X						
45,46	TS/TB												X					

Project No: 0.00 **Suburb:** **To:** Lab name

Project Manager: **Dispatch date:**

15/8/2022

303082

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2229190**	Page	: 1 of 7
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: CELINE LI	Contact	: Cez Bautista
Address	: 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 2114	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9809 0666	Telephone	: +61-2-8784 8555
Project	: 216255.01	Date Samples Received	: 16-Aug-2022 18:20
Order number	: ----	Date Analysis Commenced	: 19-Aug-2022
C-O-C number	: ----	Issue Date	: 24-Aug-2022 15:42
Sampler	: ----		
Site	: BOX HILL		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BD07-1	----	----	----	----
				Sampling date / time	16-Aug-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2229190-001	--------	--------	--------	--------
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**15.9**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**10**	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg		**20**	----	----	----	----
Copper	7440-50-8	5	mg/kg		**31**	----	----	----	----
Lead	7439-92-1	5	mg/kg		**21**	----	----	----	----
Nickel	7440-02-0	2	mg/kg		**8**	----	----	----	----
Zinc	7440-66-6	5	mg/kg		**52**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	----	----	----	----
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	1	mg/kg		<1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BD07-1	----	----	----	----
				Sampling date / time	16-Aug-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2229190-001	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BD07-1	----	----	----	----
				Sampling date / time	16-Aug-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2229190-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	----	----	----	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BD07-1	----	----	----	----
				Sampling date / time	16-Aug-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2229190-001	--------	--------	--------	--------
					Result	----	----	----	----
EP080: BTEXN - Continued									
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**68.3**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**52.5**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**59.2**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**71.3**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**85.6**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**64.1**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**96.9**	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		**87.3**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		**86.2**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**85.3**	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		**102**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		**110**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

QUALITY CONTROL REPORT

Work Order	: **ES2229190**	Page	: 1 of 11
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: CELINE LI	Contact	: Cez Bautista
Address	: 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 2114	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9809 0666	Telephone	: +61-2-8784 8555
Project	: 216255.01	Date Samples Received	: 16-Aug-2022
Order number	: ----	Date Analysis Commenced	: 19-Aug-2022
C-O-C number	: ----	Issue Date	: 24-Aug-2022
Sampler	: ----		
Site	: BOX HILL		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4532718)									
ES2229220-006	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	14	31.3	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	21	23	11.6	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	224	249	10.7	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	1010	1210	18.1	0% - 20%
ES2228658-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	31	27	13.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	13	12	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	7	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	245	281	13.7	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	68	71	4.7	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	423	483	13.1	0% - 20%
EP035SF: Total Phenol by Segmented Flow Analyser (QC Lot: 4530631)									
EP2210193-001	Anonymous	EP035SF: Phenols (Total)	----	1	mg/kg	<1	<1	0.0	No Limit
EP2210320-003	Anonymous	EP035SF: Phenols (Total)	----	1	mg/kg	<1	<1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4532719)									
ES2228658-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.3	0.4	0.0	No Limit
ES2229199-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.2	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4529666)									
ES2229085-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4529665)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4529665) - continued									
ES2228910-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2229085-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4529665) - continued									
ES2229085-001	Anonymous	EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4529665)									
ES2228910-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2229085-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4529665) - continued									
ES2229085-001	Anonymous	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4529664)									
ES2228910-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2229085-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4529664) - continued									
ES2229085-001	Anonymous	EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4529663)									
ES2228910-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2229085-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4530853)									
ES2229188-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2229343-003	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4529663)									
ES2228910-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2229085-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4530853)									
ES2229188-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2229343-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 4530853)									
ES2229188-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2229343-003	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4532718)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	101	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	82.0	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	115	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	107	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	105	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	100	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	91.4	66.0	133
EP035SF: Total Phenol by Segmented Flow Analyser (QCLot: 4530631)								
EP035SF: Phenols (Total)	----	1	mg/kg	<1	20 mg/kg	116	79.9	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4532719)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	79.9	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4529666)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	103	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4529665)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.0	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	90.1	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.9	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.8	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.9	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.9	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.2	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.2	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	91.5	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.4	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	90.4	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	64.0	122

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 4529665) - continued								
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	95.6	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4529665)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	101	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	76.6	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	81.4	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	97.7	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	90.5	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	93.4	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.5	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	94.9	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.1	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.5	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	89.4	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.3	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	107	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4529664)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	105	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	107	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	102	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	104	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	92.9	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	104	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	102	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	106	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	104	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	99.3	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	100	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	95.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	70.6	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	72.6	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	68.7	63.0	121

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4529663)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	98.6	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	92.1	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	94.0	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4530853)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	87.0	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4529663)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	96.0	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	91.4	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	103	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4530853)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	91.2	68.4	128
EP080: BTEXN (QCLot: 4530853)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	93.0	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	96.2	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	93.5	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	94.9	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	96.9	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	91.3	63.0	119

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
				Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4532718)							
ES2228658-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	93.3	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	84.9	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	82.0	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	89.8	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	86.5	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	81.8	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	76.6	66.0	133
EP035SF: Total Phenol by Segmented Flow Analyser (QCLot: 4530631)							
EP2210193-001	Anonymous	EP035SF: Phenols (Total)	----	20 mg/kg	126	76.0	131

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4532719)							
ES2228658-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	82.4	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4529666)							
ES2229085-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	96.8	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4529665)							
ES2229085-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	100	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	99.9	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	76.3	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	104	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	89.4	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	83.1	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4529665)							
ES2229085-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	110	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	93.8	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	99.1	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	98.0	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	83.9	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4529664)							
ES2229085-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	101	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	112	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4529663)							
ES2229085-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	102	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	107	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	113	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4530853)							
ES2229188-002	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	82.0	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4529663)							
ES2229085-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	98.8	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	112	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	112	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4530853)							
ES2229188-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	83.9	70.0	130
EP080: BTEXN (QCLot: 4530853)							
ES2229188-002	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	84.2	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	84.8	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	87.0	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080: BTEXN (QCLot: 4530853) - continued							
ES2229188-002	Anonymous	EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	87.6	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	89.3	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	84.0	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2229190**	Page	: 1 of 6
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: CELINE LI	Telephone	: +61-2-8784 8555
Project	: 216255.01	Date Samples Received	: 16-Aug-2022
Site	: BOX HILL	Issue Date	: 24-Aug-2022
Sampler	: ----	No. of samples received	: 1
Order number	: ----	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
BD07-1	**16-Aug-2022**	**----**	----	----	**19-Aug-2022**	30-Aug-2022	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
BD07-1	**16-Aug-2022**	**22-Aug-2022**	12-Feb-2023	✓	**22-Aug-2022**	12-Feb-2023	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
BD07-1	**16-Aug-2022**	**22-Aug-2022**	13-Sep-2022	✓	**22-Aug-2022**	13-Sep-2022	✓
EP035SF: Total Phenol by Segmented Flow Analyser							
Soil Glass Jar - Unpreserved (EP035SF)							
BD07-1	**16-Aug-2022**	**19-Aug-2022**	30-Aug-2022	✓	**22-Aug-2022**	30-Aug-2022	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
BD07-1	**16-Aug-2022**	**19-Aug-2022**	30-Aug-2022	✓	**22-Aug-2022**	28-Sep-2022	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
BD07-1	**16-Aug-2022**	**19-Aug-2022**	30-Aug-2022	✓	**22-Aug-2022**	28-Sep-2022	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
BD07-1	**16-Aug-2022**	**19-Aug-2022**	30-Aug-2022	✓	**22-Aug-2022**	28-Sep-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
BD07-1	**16-Aug-2022**	**19-Aug-2022**	30-Aug-2022	✓	**20-Aug-2022**	28-Sep-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071)							
BD07-1	**16-Aug-2022**	**19-Aug-2022**	30-Aug-2022	✓	**20-Aug-2022**	28-Sep-2022	✓
Soil Glass Jar - Unpreserved (EP080)							
BD07-1	**16-Aug-2022**	**19-Aug-2022**	30-Aug-2022	✓	**23-Aug-2022**	30-Aug-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071)							
BD07-1	**16-Aug-2022**	**19-Aug-2022**	30-Aug-2022	✓	**20-Aug-2022**	28-Sep-2022	✓
Soil Glass Jar - Unpreserved (EP080)							
BD07-1	**16-Aug-2022**	**19-Aug-2022**	30-Aug-2022	✓	**23-Aug-2022**	30-Aug-2022	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
BD07-1	**16-Aug-2022**	**19-Aug-2022**	30-Aug-2022	✓	**23-Aug-2022**	30-Aug-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
PAH/Phenols (SIM)	EP075(SIM)	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Total Phenol By Discrete Analyser	EP035SF	SOIL	In house: Referenced to ISO 14402. Phenols are extracted in 1M NaOH. The extract is diluted by 10 and then in-line-distilled at pH 1- 4. The distillate, containing steam-volatile phenolic compounds is then oxidised by hexacyanoferrate(III). The resulting quinones react with 4-aminoantipyrine forming red condensation products, which are measured spectrometrically in a flow spectrometer at 505 nm. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).

Preparation Methods	Method	Matrix	Method Descriptions
Extraction for Total Phenols in soil	EP035-PR	SOIL	In house: Soil sub-sample is extracted in 1M NaOH by tumbling for between 6 and 16 hours. The resulting extract is diluted 10 times with reagent grade water prior to analysis.
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

COC 15/8/2022 1515.

Douglas Partners
Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No: 216255.01	Suburb: Box Hill		To: Lab name
Project Manager: Celine Li	Order Number:	Sampler:	Lab address
Email:			Attn: Name
Turnaround time: ☐ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day			Lab phone Lab email
Prior Storage: ☐ Fridge ☐ Freezer ☐ Esky ☐ Shelf	Do samples contain 'potential' HBM? ☐ No ☐ Yes		(If YES, then handle, transport and store in accordance with FPM HAZID)

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo8a	Combo3	PFAS	Combo3a	HM&PAH	pH&CEC						Notes/ Preservation/ Additional Requirements
1	BH101	0.1	0.2		S	G	X											Relinquished by Elis Sudnen
2	BH101	1.9	2		S	G				X								C. Mcenne
3	BH102	0.1	0.2		S	G				X								16/8/22 1145
4	BH102	6.9	7		S	G	X											VM
5	BH103	1.9	2		S	G				X								
6	BH104	0.4	0.5		S	G	X											
7	BH104	2.7	3		S	G		X										
8	BH105	0.1	0.2		S	G	X											
9	BH106	0.4	0.5		S	G				X								
10	BH107	0.1	0.2		S	G	X											
11	BD108082022				S	G					X							
12	BH108	3.9	4		S	G				X								
13	TP109	0.1	0.2		S	G	X					X						
14	TP110	2	2.1		S	G	X											
15	TP111	0.1	0.2		S	G				X								
16	TP112	1.5	1.6		S	G	X											

Environmental Division
Sydney
Work Order Reference
ES2229190

Telephone : +61-2-8784 8555

ENVIROLAB
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 303082
Date Received: 15/8/2022
Time Received: 1515
Received By:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:			LAB RECEIPT
Number of samples in container:	Transported to laboratory by:		Lab Ref. No: 303082
Send results to: Douglas Partners Pty Ltd			Received by: 15/8/2022
Address:	Phone:		Date & Time: 1515
Relinquished by:	Date:	Signed:	Signed:

Rec: LCo 16/08/22 1820

COC 15/8/22

Douglas Partners
Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No: 0.00	Suburb:	To: Lab name
Project Manager:		Dispatch date:

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M -	Container Type: G - glass P - plastic	Analytes: Combo8a	Combo3	PFAS	Combo3a	HM&PAH	pH&CEC						Notes/ Preservation/ Additional Requirements
17	TP113	0.1	0.2		S	G				X								relinquished by FDS std cmuenn 16/8/22 1145 cm
18	TP114	0.5	0.6		S	G	X											
19	TP115	0.5	0.6		S	G	X		X									
20	TP116	0.1	0.2		S	G				X								
21	TP116	3	3.1		S	G		X										
22	TP117	0.1	0.2		S	G	X											
23	BD06				S	G					X							
24	TP118	1	1.1		S	G	X											
25	TP119	0.1	0.2		S	G				X								
26	TP119	2.7	2.8		S	G		X										
27	TP120	0.1	0.2		S	G				X								
28	TP120	1.5	1.6		S	G	X											
29	TP121	0.1	0.2		S	G	X					X						
30	BD07				S	G					X							
(i) ALS	BD07-1				S	G	X											please send to ALS
31	TP122	1	1.1		S	G				X								
32	TP123	1	1.1		S	G	X		X									
33	TP124	0.1	0.2		S	G				X								
34	TP125	1.5	1.6		S	G	X											
35	TP126	0.1	0.2		S	G				X								

Project No: 0.00	Suburb:	To: Lab name
Project Manager:		Dispatch date:

Rec: JD 16/08/22 1870

Rec 15/8/2022 303082

Appendix I

Data Quality Assurance

Appendix I
Data Quality Assurance and Quality Control
The Gables Public School, Sydney

I1.0 Field and Laboratory Data Quality Assurance and Quality Control

The field and laboratory data quality assurance and quality control (QA / QC) procedures and results are summarised in the following Table 1. Reference should be made to the field work methodology and the laboratory results / certificates of analysis for further details. The relative percentage difference (RPD) results, along with the other field QC samples are included at the end of this appendix.

Table 1: Field and Laboratory Quality Control

Item	Evaluation / Acceptance Criteria	Compliance
Analytical laboratories used	NATA accreditation	C
Holding times	Various based on type of analysis	C
Intra-laboratory replicates	10% of primary samples; <30% RPD	PC
Inter-laboratory replicates	5% of primary samples; <30% RPD	PC
Trip Spikes	1 per sampling event; 60-140% recovery	C
Trip Blanks	1 per sampling event; <PQL	C
Laboratory / Reagent Blanks	1 per batch; <PQL	C
Laboratory Duplicate	1 per lab batch; As laboratory certificate	C
Matrix Spikes	1 per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Surrogate Spikes	All organics analysis; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Control Samples	1 per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Standard Operating Procedures (SOP)	Adopting SOP for all aspects of the sampling field work	C

Notes:
C = compliance; PC = partial compliance; NC = non-compliance

The RPD results were all within the acceptable range, with the exception of those indicated in Table QA1. The exceedances are not, however, considered to be of concern given that:

- The typically low actual differences in the concentrations of the replicate pairs where some RPD exceedances occurred;
- The number of replicate pairs being collected from fill soils which by its nature is heterogeneous;
- Replicates, rather than homogenised duplicates, were used to minimise risk of volatile loss, hence greater variability can be expected;
- Most of the recorded concentrations being relatively close to the PQL;
- The majority of RPDs within a replicate pair being within the acceptable limits; and
- All other QA / QC parameters met the DQIs.

In summary, the QC data is determined to be of sufficient quality to be considered acceptable for the assessment.

I2.0 Data Quality Indicators

The reliability of field procedures and analytical results was assessed against the following data quality indicators (DQIs) as outlined in NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013):

- Completeness: a measure of the amount of usable data from a data collection activity;
- Comparability: the confidence (qualitative) that data may be considered to be equivalent for each sampling and analytical event;
- Representativeness: the confidence (qualitative) of data representativeness of media present on-site;
- Precision: a measure of variability or reproducibility of data; and
- Accuracy: a measure of closeness of the data to the 'true' value.

Table 2: Data Quality Indicators

Data Quality Indicator	Method(s) of Achievement
Completeness	Systematic locations sampled.
	Preparation of borehole and test pit logs, sample location plan and chain of custody records.
	Laboratory sample receipt information received confirming receipt of samples intact and appropriateness of the chain of custody.
	Samples analysed for contaminants of potential concern (COPC) identified in the Conceptual Site Model (CSM).
	Completion of chain of custody (COC) documentation.
	NATA accredited laboratory results certificates provided by the laboratory.
	Satisfactory frequency and results for field and laboratory quality control (QC) samples as discussed in Section 1.
Comparability	Using appropriate techniques for sample recovery, storage and transportation, which were the same for the duration of the project.
	Experienced sampler(s) used.
	Use of NATA registered laboratories, with test methods the same or similar between laboratories.
	Satisfactory results for field and laboratory QC samples.
Representativeness	Target media sampled.
	Sample numbers recovered and analysed are considered to be representative of the target media and complying with DQOs.
	Samples were extracted and analysed within holding times.
	Samples were analysed in accordance with the COC.
Precision	Field staff followed standard operating procedures.
	Acceptable RPD between original samples and replicates.
	Satisfactory results for all other field and laboratory QC samples.
Accuracy	Field staff followed standard operating procedures.
	Satisfactory results for all field and laboratory QC samples.

Based on the above, it is considered that the DQIs have been generally complied with.

I3.0 Conclusion

Based on the results of the field QA and field and laboratory QC, and evaluation against the DQIs it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment.

I4.0 References

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

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Table QA1: Relative Percentage Difference Results – Intra-laboratory Replicates

			Metals								PAH				Phenol
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs	Phenol
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BD108082022	0.1 - 0.2 m		9	<0.4	18	19	18	<0.1	8	37	<0.1	<0.05	<0.5	<0.05	-
BH107	0.1 - 0.2 m		7	<0.4	14	14	14	<0.1	7	31	<0.1	<0.05	<0.5	<0.05	<5
		Difference	2	0	4	5	4	0	1	6	0	0	0	0	-
		RPD	25%	0%	25%	**30%**	25%	0%	13%	18%	0%	0%	0%	0%	-
BD06	0.1 - 0.2 m		7	<0.4	14	15	16	<0.1	7	32	<0.1	<0.05	<0.5	<0.05	-
TP117	0.1 - 0.2 m		7	<0.4	16	14	18	<0.1	7	30	<0.1	<0.05	<0.5	<0.05	<5
		Difference	0	0	2	1	2	0	0	2	0	0	0	0	-
		RPD	0%	0%	13%	7%	12%	0%	0%	6%	0%	0%	0%	0%	-
BD07-1	0 m	16-Aug-22 15:00	10	<1	20	31	21	<0.1	8	52	<0.5	<0.5	<0.5	-	<1
TP121	0.1 - 0.2 m		7	<0.4	18	20	18	<0.1	8	40	<0.1	<0.05	<0.5	<0.05	<5
		Difference	3	0	2	11	3	0	0	12	0	0	0	-	0
		RPD	**35%**	0%	11%	**43%**	15%	0%	0%	26%	0%	0%	0%	-	0%
BD07	0.1 - 0.2 m		7	<0.4	17	19	16	<0.1	8	39	<0.1	<0.05	<0.5	<0.05	-
TP121	0.1 - 0.2 m		7	<0.4	18	20	18	<0.1	8	40	<0.1	<0.05	<0.5	<0.05	<5
		Difference	0	0	1	1	2	0	0	1	0	0	0	0	-
		RPD	0%	0%	6%	5%	12%	0%	0%	3%	0%	0%	0%	0%	-
BD04	1 - 1.1 m		<4	<0.4	10	7	10	<0.1	4	16	<0.1	<0.05	<0.5	<0.05	NT
TP129	1 - 1.1 m		5	<0.4	11	18	14	<0.1	8	35	<0.1	<0.05	<0.5	<0.05	NT
		Difference	1	0	1	11	4	0	4	19	0	0	0	0	-
		RPD	22%	0%	10%	**88%**	**33%**	0%	**67%**	**75%**	0%	0%	0%	0%	-

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Table QA1: Relative Percentage Difference Results – Intra-laboratory Replicates

			OCP													
			DDD	DDT+DDE+DDD [c]	DDE	DDT	Aldrin & Dieldrin	Endosulfan I	Total Chlordane	Endosulfan II	Endosulfan Sulphate	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BD108082022	0.1 - 0.2 m		-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107	0.1 - 0.2 m		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD06	0.1 - 0.2 m		-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP117	0.1 - 0.2 m		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD07-1	0 m	16-Aug-22 15:00	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
TP121	0.1 - 0.2 m		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1
		Difference	0	0	0	0	0	0	0	0	0	0	-	0	0	0
		RPD	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%
BD07	0.1 - 0.2 m		-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP121	0.1 - 0.2 m		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD04	1 - 1.1 m		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TP129	1 - 1.1 m		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table QA1: Relative Percentage Difference Results – Intra-laboratory Replicates

			OPP	PCB							
			Chlorpyriphos	Arochlor 1016	Total PCB	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Aroclor 1260
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BD108082022	0.1 - 0.2 m		-	-	-	-	-	-	-	-	-
BH107	0.1 - 0.2 m		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Difference	-	-	-	-	-	-	-	-	-
		RPD	-	-	-	-	-	-	-	-	-
BD06	0.1 - 0.2 m		-	-	-	-	-	-	-	-	-
TP117	0.1 - 0.2 m		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Difference	-	-	-	-	-	-	-	-	-
		RPD	-	-	-	-	-	-	-	-	-
BD07-1	0 m	16-Aug-22 15:00	<0.05	-	<0.1	-	-	-	-	-	-
TP121	0.1 - 0.2 m		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Difference	0	-	0	-	-	-	-	-	-
		RPD	0%	-	0%	-	-	-	-	-	-
BD07	0.1 - 0.2 m		-	-	-	-	-	-	-	-	-
TP121	0.1 - 0.2 m		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Difference	-	-	-	-	-	-	-	-	-
		RPD	-	-	-	-	-	-	-	-	-
BD04	1 - 1.1 m		NT	NT	NT	NT	NT	NT	NT	NT	NT
TP129	1 - 1.1 m		NT	NT	NT	NT	NT	NT	NT	NT	NT
		Difference	-	-	-	-	-	-	-	-	-
		RPD	-	-	-	-	-	-	-	-	-

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Table QA2: Trip Blank Results - Soils (mg/kg)

Sample ID	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene
TB	<0.2	<0.5	<1	<1	<2

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Table QA3: Trip Spike Results – Soils (% Recovery)

Sample ID	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene
TS	87	88	84	85	84