REPORT TO

NSW HEALTH INFRASTRUCTURE

ON

DETAILED SITE INVESTIGATION (DSI)

FOR

PROPOSED ROUSE HILL MAIN HOSPITAL

AT

COMMERCIAL ROAD, ROUSE HILL, NSW

Date: 24 September 2025
Ref: E37757Brpt.Rev1-DSI-MH

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Executive Summary

NSW Health Infrastructure ('the client') commissioned JKE to undertake a Detailed Site investigation (DSI) for the proposed Rouse Hill Main Hospital development at Commercial Road, Rouse Hill, NSW. The purpose of the investigation is to make a detailed assessment of site contamination and to establish if the site needs to be remediated. The site location is shown on Figures 1 and 2 and the DSI was confined to the main hospital site boundaries shown on Figure 2a attached in the appendices.

Our geotechnical division, JK Geotechnics (JKG) were commissioned to undertake a geotechnical investigation for the site in conjunction with this DSI. The results of the geotechnical investigation are presented in a separate report (Ref: 37756LFrpt2 Main Hospital). This report should be read in conjunction with the JKG report.

A number of investigations have been previously undertaken across the main hospital site. A summary of key information relevant to this report is included in Section 2.

Works will also be carried out at the DPHI site and along Commercial Road comprising of new concrete islands and road widening to facilitate the site entry in the northeastern corner of the site. A shared pathway will also be constructed in the southwestern corner of the site connecting the site to the corner of Windsor Road and Rouse Hill Drive. JKE and JKG were engaged to investigate these areas, and the results of the investigation are presented in separate reports.

The primary aims of the investigation were to identify any past or present potentially contaminating activities at the site, identify the potential for site contamination, and make a detailed assessment of the soil and groundwater contamination conditions. The objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records presented in previous investigation reports;
- Assess the current site conditions and use(s) via a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Assess the soil and groundwater contamination conditions via implementation of a detailed sampling and analysis program;
- Prepare a conceptual site model (CSM);
- Assess the potential risks posed by contamination to the receptors identified in the CSM (Tier 1 assessment);
- Assess whether the site is suitable or can be made suitable for the proposed development (from a contamination viewpoint); and
- Assess whether further investigation and/or remediation is required.

The scope of work included the following:

- Review of site information, including background and site history information from various sources outlined in the report;
- Preparation of a CSM;
- Design and implementation of a sampling, analysis and quality plan (SAQP);
- Interpretation of the analytical results against the adopted Site Assessment Criteria (SAC);
- Data Quality Assessment; and
- Preparation of a report including a Tier 1 risk assessment.

The DSI included a review of site information including previous investigations completed at the site, historical information, soil sampling from 32 testpits locations and groundwater sampling from six monitoring wells. The site has been historically used for agricultural (grazing) purposes prior to the 1970s and as a golf course between 1970s to circa 1994.

The DSI identified the following AEC at the site: fill material and former land use as a golf course. The CSM identified the adjoining electrical substation as a potential off-site AEC.

The soil laboratory results did not identify any elevations of CoPC above the human health-based and ecological SAC.

JKE note that a total PCB concentration of 1.2mg/kg (which was below the SAC of 7 mg/kg) was detected in fill sample obtained from TP521 (0-0.1m). A field duplicate/replicate sample SDUP503 (0-0.1m) obtained from the same fill profile was analysed for total PCBs. The result was less than the laboratory detection limits (PQL), indicating that the primary result was an anomaly. An underlying natural soil sample TP521 (0.4-0.5m) was also analysed for total PCBs and the results were less than the PQL.

TP521 is located in the central section of the hospital site as shown on Figure 2a. No point sources of PCBs were identified during the DSI or the previous investigations undertaken at the hospital site. Since the detection is within the surficial fill profile, and as the nearest adjacent sampling points are 28m away, the potential extent of the PCBs is uncertain, and it is possible that the sample in TP521 has not detected the highest concentrations. On this basis and considering there is a potential for a complete SPR linkage to eventuate due to the surficial nature of the impact, further action is required.

JKE recommend additional targeted sampling and further analysis of PCBs in soils in the vicinity of TP521, followed by a site-specific Tier 2 Human Health Risk Assessment (HHRA) to address the NEPM (2013) framework. If risks are assessed to be unacceptable, then a Remediation Action Plan (RAP) must be prepared and implemented. We recommend that the specialist HHRA consultant be engaged and provide advice relating to the specific type of PCB analysis required to inform the risk assessment, prior to completing the additional sampling.

We recommend that an Unexpected Finds Protocol (UFP) be prepared, and this must include a specific contingency plan for the removal of any former asbestos containing irrigation pipelines that may still remain on the hospital site, and also protocols for addressing other unexpected finds.

Elevations of selected heavy metals (copper, nickel and zinc) and PFOS (a PFAS substance) were detected in the groundwater above the ecological SAC. We have assessed the risk pose by these elevations to be low in the context of the proposed land use provided that if groundwater is encountered during construction, it is appropriately managed.

Based on the results of the DSI, JKE is of the opinion that the site can be made suitable for the landuse as outlined in Section 1.1 by undertaking a HHRA to assess the need for remediation and by implementing the recommendations made within this report.

At this stage, JKE consider the need to report site contamination to the NSW EPA under the Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997 (2015) should be assessed on completion of the HHRA.

JKE consider that the report objectives outlined in Section 1.2 have been addressed. The conclusions and recommendations should be read in conjunction with the limitations presented in the body of this report.

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Abbreviations

Asbestos Fines/Fibrous Asbestos	**AF/FA**
Ambient Background Concentrations	**ABC**
Added Contaminant Limits	**ACL**
Asbestos Containing Material	**ACM**
Australian Drinking Water Guidelines	**ADWG**
Area of Environmental Concern	**AEC**
Australian Height Datum	**AHD**
Acid Sulfate Soil	**ASS**
Above-Ground Storage Tank	**AST**
Before You Dig Australia	**BYDA**
Below Ground Level	**BGL**
Benzo(a)pyrene Toxicity Equivalent Factor	**BaP TEQ**
Bureau of Meteorology	**BOM**
Benzene, Toluene, Ethylbenzene, Xylene	**BTEX**
Cation Exchange Capacity	**CEC**
Cis-1,2-dichloroethene	**cis-DCE**
Combined Risk Value	**CRV**
Contaminated Land Management	**CLM**
Contaminant(s) of Potential Concern	**CoPC**
Chain of Custody	**COC**
Conceptual Site Model	**CSM**
Development Application	**DA**
Data Quality Indicator	**DQI**
Data Quality Objective	**DQO**
Detailed Site Investigation	**DSI**
Ecological Investigation Level	**EIL**
Ecological Screening Level	**ESL**
Environmental Management Plan	**EMP**
Excavated Natural Material	**ENM**
Environment Protection Authority	**EPA**
Environmental Site Assessment	**ESA**
Fibre Cement Fragment(s)	**FCF**
Finished Floor Level	**FFL**
General Approval of Immobilisation	**GAI**
Health Investigation Level	**HIL**
Health Screening Level	**HSL**
Health Screening Level-Site Specific Assessment	**HSL-SSA**
International Organisation of Standardisation	**ISO**
JK Environments	**JKE**
JK Geotechnics	**JKG**
Lab Control Spike	**LCS**
Light Non-Aqueous Phase Liquid	**LNAPL**
Map Grid of Australia	**MGA**
National Association of Testing Authorities	**NATA**
National Environmental Protection Measure	**NEPM**
Organochlorine Pesticides	**OCP**
Organophosphate Pesticides	**OPP**
Perchloroethylene (also known as tetrachloroethene)	**PCE**
Polycyclic Aromatic Hydrocarbons	**PAH**
Potential ASS	**PASS**
Polychlorinated Biphenyls	**PCB**
Per-and Polyfluoroalkyl Substances	**PFAS**
Perfluorooctanoic Acid	**PFOA**

Perfluorooctanesulfonic Acid	**PFOS**
Perfluorohexane Sulfonate	**PFHxS**
Photo-ionisation Detector	**PID**
Protection of the Environment Operations	**POEO**
Practical Quantitation Limit	**PQL**
Quality Assurance	**QA**
Quality Control	**QC**
Relative Level	**RL**
Remediation Action Plan	**RAP**
Relative Percentage Difference	**RPD**
Reduced/Relative Level	**RL**
Site Assessment Criteria	**SAC**
Sampling, Analysis and Quality Plan	**SAQP**
Site Audit Statement	**SAS**
Site Audit Report	**SAR**
State Environmental Planning Policy	**SEPP**
Site Specific Assessment	**SSA**
Source, Pathway, Receptor	**SPR**
Specific Contamination Concentration	**SCC**
Standard Penetration Test	**SPT**
Standing Water Level	**SWL**
Trichloroethene	**TCE**
Trip Blank	**TB**
Toxicity Characteristic Leaching Procedure	**TCLP**
Total Recoverable Hydrocarbons	**TRH**
Trip Spike	**TS**
Upper Confidence Limit	**UCL**
United States Environmental Protection Agency	**USEPA**
Underground Storage Tank	**UST**
Virgin Excavated Natural Material	**VENM**
Vinyl Chloride	**VC**
Volatile Organic Compounds	**VOC**
World Health Organisation	**WHO**
Work Health and Safety	**WHS**

Units

Litres	**L**
Metres BGL	**mBGL**
Metres	**m**
Millivolts	**mV**
Millilitres	**ml or mL**
Milliequivalents	**meq**
micro Siemens per Centimetre	**µS/cm**
Micrograms per Litre	**µg/L**
Milligrams per Kilogram	**mg/kg**
Milligrams per Litre	**mg/L**
Parts Per Million	**ppm**
Percentage	**%**
Percentage weight for weight	**%w/w**

1 INTRODUCTION

NSW Health Infrastructure ('the client') commissioned JKE to undertake a Detailed Site investigation (DSI) for the proposed Rouse Hill Main Hospital development at Commercial Road, Rouse Hill, NSW. The purpose of the investigation is to make a detailed assessment of site contamination and to establish if the site needs to be remediated. The site location is shown on Figures 1 and 2 and the DSI was confined to the main hospital site boundaries shown on Figure 2a attached in the appendices.

Our geotechnical division, JK Geotechnics (JKG) were commissioned to undertake a geotechnical investigation for the site in conjunction with this DSI. The results of the geotechnical investigation are presented in a separate report (Ref: 37756LFrpt2 Main Hospital)[1]. This report should be read in conjunction with the JKG report.

A number of investigations have been previously undertaken across the main hospital site. A summary of key information relevant to this report is included in Section 2.

1.1 Proposed Excavation Details

A review of the supplied information indicates that the proposed Bulk Excavation Level (BEL) for the main hospital building will be at RL50.8m, which is assumed to be 0.2m below the proposed Finished Floor Level (FFL) of RL51.0m. We note the southern end of the main building will comprise a loading dock with a FFL at RL49.8m which will connect into the externally paved areas. The proposed multi-storey car park will have a BEL at approximately RL55.2m and RL56.55m, which is assumed to be 0.3m below the FFL, and will require a step in the ground floor level with the western half of the lower level higher. External roads and landscape areas around the above two structures will also be constructed. Based on these levels we expect up to approximately 2m of filling and 4m of cut to achieve the design levels.

Works will also be carried out at the DPHI site and along Commercial Road comprising of new concrete islands and road widening to facilitate the site entry in the north-eastern corner of the site. A shared pathway will also be constructed in the south-western corner of the site connecting the site to the corner of Windsor Road and Rouse Hill Drive. JKE and JKG were engaged to investigate these areas, and the results of the investigation are presented in separate reports.

1.2 Aims and Objectives

The primary aims of the investigation were to identify any past or present potentially contaminating activities at the site, identify the potential for site contamination, and make a detailed assessment of the soil and groundwater contamination conditions. The objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records presented in previous investigation reports;
- Assess the current site conditions and use(s) via a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);

[1] JKG, (2025). *Report to Health Infrastructure on Geotechnical Investigation for Main Hospital Development at Commercial Road, Rouse Hill, NSW.* (referred to as JKG report)

- Assess the soil and groundwater contamination conditions via implementation of a detailed sampling and analysis program;
- Prepare a conceptual site model (CSM);
- Assess the potential risks posed by contamination to the receptors identified in the CSM (Tier 1 assessment);
- Assess whether the site is suitable or can be made suitable for the proposed development (from a contamination viewpoint); and
- Assess whether further investigation and/or remediation is required.

1.3 Scope of Work

The investigation was undertaken generally in accordance with a Consultancy Agreement (CA) HI25251 between the client and JKG/JKE dated 10 July 2025.

The scope of work included the following:

- Review of site information, including background and site history information from various sources outlined in the report;
- Preparation of a CSM;
- Design and implementation of a sampling, analysis and quality plan (SAQP);
- Interpretation of the analytical results against the adopted Site Assessment Criteria (SAC);
- Data Quality Assessment; and
- Preparation of a report including a Tier 1 risk assessment.

The scope of work was undertaken with reference to the National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013)[2], other guidelines made under or with regards to the Contaminated Land Management Act (1997)[3] and SEPP Resilience and Hazards 2021. A list of reference documents/guidelines is included in the appendices.

[2] National Environment Protection Council (NEPC), (2013). *National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013).* (referred to as NEPM 2013)

[3] Contaminated Land Management Act 1997 (NSW) (referred to as CLM Act 1997)

2 SITE INFORMATION

2.1 Summary of Previous Investigations

Table 2-1: Summary of Previous Investigations

Historical Assessments (circa 2000 to 2006)	Environmental Investigation Services (EIS, now JKE) has previously undertaken various stages of assessment across a larger area of the Rouse Hill precinct that incorporated the site[4]. The assessments included a review of a Geotechnique Stage 1 Preliminary Environmental Site Assessment[5] and soil and groundwater sampling across an approximately 100 hectare portion of land (the wider site). The site was located in the north-west corner of the wider site. The Stage 1 preliminary assessment undertaken by Geotechnique Pty Ltd included a review of historical records, limited soil sampling and laboratory chemical analysis. The Phase 2 assessment included soil sampling from 401 locations in 2003 and an additional 20 locations in 2006. Nine of the locations from 2003 were within the site (C306, C307, E64, E73, E197, E198, ET4, ET5 and ET17) and an additional six locations from 2006 were within the site (TP210, TP212, TP213, TP214, TP215 and TP216). At the time of the Phase 2 assessment the site was part of a larger golf course. No dams or other excavated areas were located within the site. The sampling locations within the site typically encountered topsoil or fill to depths of approximately 0.2m to 0.5m below ground level (BGL), underlain by natural silty clay soil. The topsoil/fill was typically silty clay and contained traces of roots and ironstone gravel. Laboratory analysis included analysis of heavy metals (arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel and zinc), polycyclic aromatic hydrocarbons (PAHs), total recoverable hydrocarbons (TRH), organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs). The majority of samples were analysed for a selection of the contaminants listed, rather than the full suite. The report indicated that all results were within the most sensitive health-based land use criteria (residential with accessible soil), based on the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC Guidelines), except for elevated levels of lead encountered from the periphery of a house and galvanised shed, and a slightly elevated heavy fraction hydrocarbon concentration from beneath a scrap metal stockpile. Both of these areas with elevated lead and hydrocarbons in soil were not on the site. The Phase 2 assessment concluded that the wider site was relatively clean from a contamination viewpoint and was not considered to require remediation. The minor levels of contamination that were encountered across the wider site were associated with rubbish and waste and the process of rubbish and waste removal was anticipated to effectively remove all of these materials. The rubbish and waste at the wider site included variable asbestos containing material (ACM) in the form of sheeting and pipework. The ACM was in a bound form in a cement matrix and analysis of soil in the waste and rubbish areas did not detect free asbestos fibres. Removal of the rubbish and waste from the wider site was recommended prior to any construction activity. We note that no rubbish areas were located on the site. However, a section of the former ACM pipe was located onsite as shown on Figure 2.

[4] EIS, (2003). *Report to Lend lease GPT (Rouse Hill) Pty Ltd Supplementary Phase 2 Environmental Site Assessment for Proposed Rouse Hill Regional Centre at Cnr Windsor and Commercial Roads, Rouse Hill, NSW* (ref: E17777F-RPT and E17777F-RPT3, dated September 2003 and November 2006) (referred to as Phase 2 assessment)

[5] Geotechnique, (2000). *Stage 1 Preliminary Environmental Site Assessment, Geotechnique Pty Ltd for the Department of Urban Affairs and Planning* (Ref: 3073/1-AA dated 15 March 2000) (referred to as Stage 1)

Rehabilitation and Early Validation Works (circa 2006 – 2007)	Rubbish and a buried asbestos pipeline removal were undertaken in 2006 and EIS completed inspections and prepared a validation report[6] for the works across the Rouse Hill Town Centre (RHTC) site. No rubbish was located on the site, however, a section of buried asbestos pipeline extended through the site (see Figure 2). Trenches were excavated for the removal of the asbestos pipeline and were visually inspected by an experienced environmental scientist. Where Fibre-Cement Fragments (FCF) were encountered during the inspection, the areas were over excavated until all FCF was removed. Based on the scope of work completed, the site was considered suitable for the proposed mixed residential and commercial land use. A Site Audit Statement (SAS) was issued for the proposed development by Mr Ross McFarland, a NSW EPA accredited site auditor (now with AECOM).
DSI by JBS&G (2020)	JBS&G completed a DSI[7] across the main hospital portion of the site in 2020, and this report also references a PSI undertaken across a broader parcel of land, yet this was not provided for JKE to review. The PSI indicated that the broader parcel of land was historically occupied by agricultural land before development as a golf course in the 1970s, and the following potential sources of contamination across the broader parcel of land were identified: • Historical pesticides/herbicides use and nutrient loading during historical golf course operation; • Stockpiles of unknown origin; • Fly tipping/dumped material; • Hazardous building materials associated with former built structures (including asbestos containing material (ACM) pipes); and • Off-site substation to the north. The JBS&G DSI included soil sampling from 36 locations cross Lot 28 DP270520 (approximately 1.8 hectares), and an inspection across the broader parcel of land. The former Lot 28 DP270520 captured the majority of the site except for a small section along the eastern and southern boundary. Sampling was undertaken using hand tools and silty clay and clay fill was encountered at most locations, ranging from approximately 0.1mBGL to 1.2mBGL. No ACM, odours or staining were observed on the ground surface or within fill material from sampling locations. Laboratory analysis returned a copper ecological based SAC exceedance at 130mg/kg in BH01 (0-0.1m), and statistical analysis via 95% Upper Confidence Limit (UCL) calculations which returned at 59.57mg/kg, which was then below the ecological based SAC of 75mg/kg. The standard deviation was 18.56mg/kg, less than half the criterion and the concentration in samples were all less than 250% of the criterion. The JBS&G DSI report concluded that there was a lack of widespread or significant asbestos in the soils, however the scope was limited by sampling using hand tools, and there was a remaining potential for localised asbestos or otherwise impacted soils at the site. Based on the conditions on site, JBS&G concluded that there were low risks of contamination migration from groundwater or off-site migration and the site was deemed suitable for the proposed hospital. The fill on site was also classified as General Solid Waste (non-putrescible), and the natural soil was classified as virgin excavated natural material (VENM) for off-disposal.

[6] EIS, (2006). *Report to Bovis Lend Lease on Validation of Site Rehabilitation for Proposed Rouse Hill Town Centre at Windsor Road, Rouse Hill, NSW* (ref: E17777FVAL, dated July 2006)

[7] JBS&G, (2020). Report to Health Infrastructure on Detailed Site Investigation, New Rouse Hill Hospital, Commercial Road, Rouse Hill, NSW (Ref: 59460/132546 (Rev 0) dated 23 September 2020) (referred to as JBS&G DSI)

Preliminary Geotechnical Investigation (JKG, 2022)[8]	JKG has previously undertaken a preliminary geotechnical investigation at the site for the proposed development. The geotechnical investigation included drilling of six boreholes (BH1 to BH6 inclusive), including the installation of three groundwater monitoring wells (BH/MW1, BH/MW4 and BH/MW6). The monitoring well locations are shown on Figure 2. The investigation encountered clayey fill in all boreholes, extending to depths of approximately 0.2m and 0.9mBGL, with inclusions of ash and root fibres. Residual silty clay was encountered in all boreholes beneath the fill and was assessed to be of high plasticity and of hard strength. Weathered siltstone bedrock was encountered in all boreholes beneath the residual clay at depths ranging from approximately 0.6m to 1.8mBGL. The boreholes did not encounter groundwater during auger drilling.
Supplementary Detailed Site Investigation (SDSI) (JKE, 2022)[9]	JKE has previously prepared a supplementary DSI (SDSI) at the site for the proposed development. The primary aims of the investigation were to review previously identified potentially contaminating activities at the site, identify the potential for site contamination, and make an assessment of the soil and groundwater contamination conditions. The SDSI included review of previous investigations completed at the site, a walkover site inspection, soil sampling from 32 locations and groundwater sampling from three monitoring wells installed by JKG. Fill was encountered at the surface in all testpits, except TP11, and extended to depths of approximately 0.1m to 1.2mBGL. The fill typically comprised silty clay with inclusions of ironstone, sandstone and siltstone gravel, ash and root fibres. Concentrations of nickel and zinc were encountered in the groundwater samples that exceeded the ecological based site assessment criteria (SAC). Based on the findings of the investigation, JKE noted that the site was suitable for the proposed development without the need for remediation. There was considered to be a relatively low potential for contamination-related unexpected finds to occur at the site during the proposed development works. The report recommended: • A DSI for the works to be carried out along Commercial Road, Shared pathway and DPHI sites. Based on the results of the DSI, consideration should be made for the requirements of prepared a Remediation Action Plan (RAP) and any long-term Environmental Management Plan (EMP) for the proposed development at the sites; and • Prepare an Unexpected Finds Procedure (UFP) as part of the RAP so that this procedure can be implemented during any future site works. We also recommend that the site remain secured and that the client organise regular inspections to ensure that unauthorised access and fly tipping does not occur. The report also recommended that the site remain secured and that the client organise regular inspections to ensure that unauthorised access and fly tipping does not occur.
Hydrogeological Analysis (JKG, 2022)[10]	A hydrogeological analysis report was prepared for the site by JKG. The purpose of the analysis was to prepare a geotechnical model of the site, based on previous geotechnical investigations undertaken by JKG, and to assess the potential seepage volumes into the ground floor excavation during construction and on-going use of the hospital.

[8] JKG, (2022). *Report to Health Infrastructure on Preliminary Geotechnical Investigation for Proposed Rouse Hill Hospital at corner of Commercial and Windsor Road, Rouse Hill, NSW* (Ref: 35128LFrpt-Rev3) dated 10 July 2025 (referred to as JKG Preliminary Investigation).

[9] JKE, (2022). *Report to NSW Health Infrastructure on Supplementary Detailed (Stage 2) Site Investigation for Proposed Rouse Hill Hospital at corner of Windsor Road and Commercial Road, Rouse Hill, NSW* (Ref: E35128PHrpt-Rev5) dated 11 July 2025 (referred to as JKE SDSI).

[10] JKG, (2022). *Report to NSW Health Infrastructure on Hydrogeological Analysis for Proposed Rouse Hill Hospital at corner of Commercial and Windsor Road, Rouse Hill, NSW* (Ref: E35128PHrpt2-Rev5) dated 10 July 2025 (referred to as JKG Hydro Report).

	The report indicated that the groundwater on site is within the siltstone bedrock profile and is relatively non-responsive to rainfall. Based on measured groundwater levels, it was inferred that the hydraulic gradient flows generally towards the south-east. The standing water level (SWL) recorded in the monitoring wells ranged from approximately 45.2mAHD to 50mAHD.
Groundwater Quality Screening (JKE, 2024a)[11]	JKE undertook a groundwater quality screening for the proposed development. The screening included groundwater sampling from the three monitoring wells installed by JKG. Based on the results of the screening, the groundwater samples identified concentrations of copper, zinc and aluminium above the ecological SAC adopted for potential disposal to stormwater. Groundwater samples MW1 and MW4 also encountered detections of Faecal Coliforms and E. Coli. The report recommended treatment of groundwater prior to disposal to stormwater. Council approval should be obtained prior to discharge to stormwater and conditions imposed by Council on the discharge should be complied with.
Dryland Salinity and Acid Sulfate Soil Assessment (JKE, 2024b)[12]	JKE undertook a dryland salinity and ASS assessment for the proposed development. The screening included groundwater sampling from the three monitoring wells installed by JKG. The assessment included soil sampling from nine boreholes (BH101 to BH109) placed on a regular grid pattern as shown on Figure 2 of the report. The assessment also included the installation of three groundwater monitoring wells (MW102, MW103 and MW109) and sampling from three existing groundwater monitoring wells (MW1, MW4 and MW6) spread across the site as shown on Figure 2 attached in the appendices. The wells were positioned for site coverage to establish baseline salinity conditions. The assessment identified the following salinity conditions at the site: • The soils are classed as very strongly acidic to very strongly alkaline; • The soils are generally classed as non-saline to slightly saline; • The soils are generally sodic to highly sodic; • The soils are generally mildly aggressive towards buried concrete; • The soils were non-aggressive towards buried steel; • The groundwater is classed as saline; • The groundwater is mildly aggressive towards buried concrete; and • The groundwater is non-aggressive towards buried steel. Based on the results, the report concluded that a salinity management plan (SMP) is required for the proposed development. A site specific SMP should be prepared when development plans have been finalised for the proposed development. The assessment did not identify any risks from potential ASS (PASS) and concluded that an ASS management plan (ASSMP) was not considered necessary for the proposed development.
Surface Water and Groundwater Impact Assessment (JKE, 2024c)[13]	JKE were commissioned to prepare a SGIA for the proposed development. The assessment included the following: • Review of previous investigation reports prepared for the site by JKG and JKE; • Review of surface and groundwater conditions including: hydrology; hydro-geology; receiving water bodies: occurrence of groundwater; groundwater quality; groundwater dependent ecosystems (GDE); inflow dependent ecosystems (IDE);

[11] JKE, (2024a). *Report to NSW Health Infrastructure on Groundwater Quality Screening for Proposed Rouse Hill Hospital at corner of Commercial and Windsor Road, Rouse Hill, NSW* (Ref: E35128Brpt-Rev2) dated 11 July 2025 (referred to as JKE GWQ screening).

[12] JKE, (2024b). *Report to NSW Health Infrastructure on Dryland Salinity and Acid Sulfate Soil Assessment for Proposed Rouse Hill Hospital at corner of Commercial and Windsor Road, Rouse Hill, NSW* (Ref: E35128Brpt2-Rev2) dated 11 July 2025 (referred to as JKE salinity report).

[13] JKE, (2024c). *Report to NSW Health Infrastructure on Surface Water and Groundwater Impact Assessment for Proposed Rouse Hill Hospital at corner of Commercial and Windsor Road, Rouse Hill, NSW* (Ref: E35128Brpt3-Rev2) dated 11 July 2025 (referred to as JKE SGIA report).

	• Review of drainage lines, downstream groundwater users and watercourses in the immediate vicinity of the site; • Review of surface water and groundwater conditions at the site including: surface water flow; groundwater flow; groundwater permeability; surface and groundwater quality; groundwater contamination conditions; and other parameters; and • Preparation of a report identifying the surface and groundwater conditions at the site and potential impacts associated with the proposed development. The SGIA identified a range of mitigation measures which require addressing as part of the proposed development.
Salinity Management Plan (JKE, 2024d)[14]	JKE were commissioned to prepare a SMP for the proposed development. The SMP included the following: • Review of previous relevant investigation reports prepared for the site (prepared by JKG and JKE); • Review site information including topography, soils maps, salinity risk maps, regional geology and hydro-geology in the vicinity of the site; • A walkover site inspection to identify obvious visual indicators of dryland salinity or potential problem areas; and • Preparation of a SMP for the proposed development. The SMP identified a range of management measures which require addressing as part of the proposed development.
Sampling Analysis Quality Plan (SAQP) (JKE and JKG, 2025[15])	JKE and JKG were commissioned to prepare a SAQP for the investigation of the DPHI, Commercial Road and Shared pathway sites in 2025. The SAQP included recommendations for additional soil and groundwater investigation works including the following: • Geotechnical investigation along DPHI, Commercial Road and Shared pathway; • Contamination investigation of soil and groundwater conditions along DPHI, Commercial Road and Shared pathway; • Investigation of dryland salinity and ASS conditions along DPHI, Commercial Road and Shared pathway; • Surface and groundwater impacted assessment (SGIA) along DPHI, Commercial Road and Shared pathway; and • Identify the need for mitigation measures based on the results of the above additional investigations. The additional sampling requirements outlined in the SAQP have been incorporated within this report as discussed in the below sections.

2.1.1 Review of Previous Contamination Investigations

Previous investigations included sampling and analysis of soil/fill across the site and a wider area between 2003 and 2006, followed by validation of removal of an asbestos pipeline in 2006. The JBS&G DSI included sampling across most of the main hospital site, excluding a small section along the east and south boundaries

[14] JKE, (2024d). *Report to NSW Health Infrastructure on Salinity Management Plan for Proposed Rouse Hill Hospital at corner of Commercial and Windsor Road, Rouse Hill, NSW* (Ref: E35128Brpt4-Rev1) dated 11 July 2025 (referred to as JKE SMP report).

[15] JKE, (2025). *Report to NSW Health Infrastructure on Sampling Analysis and Quality Plan for Data Gap Investigation (DGI) for Proposed Rouse Hill Hospital at corner of Commercial and Windsor Roads, Rouse Hill, NSW* (Ref: E35128Brpt5-Rev1-SAQP) dated 11 July 2025 (referred to as JKE SAQP).

of the site (generally between 12m and 16m wide). Subsurface conditions encountered during the JBS&G DSI were generally similar to those encountered during the earlier EIS works.

Contaminant concentrations encountered during both the EIS and JBS&G investigations were broadly similar and were generally less than the adopted criteria for human health and ecology. We note that although JBS&G adopted the less conservative criteria for 'residential with minimal opportunities for access to soil', the results were also less than the most conservative criteria for 'residential with accessible soil' land use, with the exception of one copper result that exceeded the ecological based criteria.

Based on a weight of evidence assessment of data collected between 2003 and 2020, the risk of contamination at the site posing a risk to the proposed development/land use is considered to be low. As noted in the JBS&G report, there remains a risk that asbestos may be present at the site that was not previously encountered due to the use of hand tools to excavate the sampling locations.

2.2 Site Identification

Table 2-2: Site Identification

Current Site Owner (certificate of title):	NSW Health Administration Corporation
Site Address:	Commercial Road, Rouse Hill, NSW
Lot & Deposited Plan:	Lot 311 and Lot 312 DP 1274392
Current Land Use:	Vacant
Proposed Land Use:	Proposed Rouse Hill Hospital
Local Government Area:	The Hills Shire Council
Current Zoning:	MU1 – Mixed use
Site Area (m^2) (approx.):	22,000
RL (AHD in m) (approx.):	49-56
Geographical Location (decimal degrees) (approx.):	Latitude: -33.688149 Longitude: 150.921881
Site Figures:	Appendix A

2.3 Site Location and Regional Setting

The site is located in a predominantly commercial area of Rouse Hill, with some remnants of former residential and rural land use to the west, to the south-east of the intersection of Windsor Road and Commercial Road as shown on Figure 1. The site is located approximately 500m to the west of Caddies Creek.

2.4 Topography

The regional topography is characterised by gently undulating areas that typically falls towards local creeks and gullies. The main hospital site itself gently slopes to the south-east.

2.5 Site Inspection

A walkover inspection of the main hospital site was undertaken by JKE on 24 July 2025. The inspection was limited to accessible areas of the site and immediate surrounds. Selected site photographs obtained during the inspection are attached in the appendices.

A summary of the inspection findings is outlined in the following subsections:

2.5.1 Current Site Use and/or Indicators of Former Site Use

At the time of the inspection, the main hospital site was vacant and grassed, with mature trees sporadically across the site.

2.5.2 Buildings, Structures and Roads

An asphaltic concrete (AC) driveway was located along the north-east of the main hospital site which links to Commercial Road to the north. A gravel path was noted along the eastern, southern, and western boundaries.

2.5.3 Boundary Conditions, Soil Stability and Erosion

The main hospital site was fenced on all boundaries with chain link fencing. Some small areas of exposed soil were observed at the ground surface. There was no evidence of soil erosion observed during the inspection.

2.5.4 Presence of Drums/Chemical Storage and Waste

No obvious signs of chemical or waste storage were observed on the main hospital site.

2.5.5 Evidence of Cut and Fill

Exposed fill was noted at the ground surface to the south-west, and to the north-west, and there was evidence to the south-east of an exposed test pit/trench. These features are most likely associated with archaeological investigations that have been carried out on the main hospital site. The are subject to the archaeological investigation is shown on Figure 2.

The JBS&G DSI indicated the presence of former fill mounds and stockpiles located across the site. Reference should be made to Figure 2 of the JBS&G DSI attached in Appendix B. During the JKE inspection, no obvious stockpiles or mounds were observed as shown on the photos attached in the appendices.

2.5.6 Visible or Olfactory Indicators of Contamination (odours, spills etc)

Other than fill, which is a potential source of contamination, there were no obvious indicators of contamination were observed at the main hospital site.

2.5.7 Drainage and Services

Surface water would be expected to flow to the small gully to the south section of the main hospital site before moving east towards Caddies Creek.

2.5.8 Sensitive Environments

Sensitive environments such as wetlands, ponds, creeks or extensive areas of natural vegetation were not identified on site or in the immediate surrounds.

2.5.9 Landscaped Areas and Visible Signs of Plant Stress

The majority of the main hospital site was vegetated with grass, weeds and mature trees. No obvious signs of plans stress of dieback were observed.

2.6 Surrounding Land Use

During the site inspection, JKE observed the following land uses in the immediate surrounds:

- North – Endeavour Energy Substation along the northern boundary as shown on Figures 1 and 2. We note that the substation was not present in 2006 and had been constructed prior to the JBS&G DSI in 2020. Commercial Road is also located north of the hospital site with a shopping centre, fast food restaurant, and hotel;
- South – Vacant land in a similar condition to the hospital site, with Rouse Hill Drive and Rouse Hill Town Centre (shopping centre) beyond;
- East – Predominately vacant land in a similar condition to the hospital site, with an on-grade car park approximately 140m to the east of the site; and
- West – DPHI site and a bus terminal with Windsor Road beyond and a railway overpass to the south-west.

JKE note the Endeavour Energy Substation appears to have been recently constructed (between 2006 and 2014) in the vicinity of the site. The generation of electrical power such as the substations are listed in Table C1 as an activity associated with the potential use of Per-and Polyfluoroalkyl Substances (PFAS) due to fire risk in the PFAS National Environmental Management Plan (NEMP 2025)[16]. The NEMP 2025 also indicates the following activities associate more broadly with PFAS contamination including: firefighting at electricity generation sites and in electricity distribution networks with oil-containing equipment such as transformers, reactors, large regulators, circuit breakers, pipe-type cable systems and bulk storage tanks. Considering the above, JKE has included the substation as a potential off-site contamination source for PFAS in the CSM.

[16] HEPA, (2025). *PFAS National Environmental Management Plan Version 3.0 (referred to as NEMP 2025)*

JKE note that PCBs are no longer in used in new substations as the importation and manufacture of PCBs were banned in the 1970s and 1980s, and their use was phased out under the National PCB Management Plan by 2009[17]. While older equipment may still contain PCBs, new electrical equipment, including transformers and capacitors for substations, would use modern, non-PCB insulating fluids.

2.7 Underground Services

The 'Before You Dig Australia' (BYDA) plans were reviewed for the investigation in order to establish whether any major underground services exist at the hospital site or in the immediate vicinity that could act as a preferential pathway for contamination migration.

High voltage (HV) electricity cables are noted in the western portion of the hospital site running parallel to the western boundary. Copies of Endeavour Energy Plans showing the cables are attached in the appendices. JKE note that many HV transmission cables often contain oil which act as a liquid dielectric and helps with preventing overheating. Care should be taken not to damage the cables during the proposed development works as any potential oil spills could pose a contamination risk.

2.8 Interview with Site Personnel

JKE note that the hospital site is currently vacant. Ford Civil have established some fencing across the site in anticipation of commencement of early works.

2.9 Local Meteorology

Key meteorological data for Baulkham Hills Eucalyptus Ct weather station 67109 available on the Bureau of Meteorology (BOM)[18] website has been reviewed for the DSI and JKE note the following for 2025:

- The highest mean rainfall occurs in May, with a total of 172.5mm;
- The lowest mean rainfall occurs in June, with a total of 9.5mm; and
- In the weeks leading up to the JKE inspections, approximately 87.5mm of rainfall was recorded in July 2025. The historical mean rainfall for July is around 49.7mm.

Heavy rainfall was recorded in the lead-up to, and during the DSI investigation. The heavy rainfall is likely to influence the SWL and groundwater quality recorded in the monitoring wells.

2.10 Section 10.7 Planning Certificate

The section 10.7 (2 and 5) planning certificates were reviewed for the investigation. Copies of the certificates are attached in the appendices. A summary of the relevant information is outlined below:

- The land is not deemed to be: significantly contaminated; subject to a management order; subject of an approved voluntary management proposal; or subject to an on-going management order under the provisions of the CLM Act 1997;
- The land is not the subject of a Site Audit Statement (SAS). JKE note that the historical site audit conducted in 2006-2007 has not been recorded on the planning certificates;

[17] https://www.epa.vic.gov.au/polychlorinated-biphenyls-pcbs

[18] https://www.bom.gov.au/climate/data/stations/ (visited on 25 August 2025)

- The land is not located within an acid sulfate soil (ASS) risk area;
- The land is not impacted by dryland salinity; and
- The land is identified as being in the vicinity of a heritage item or conservation area.

2.11 Regional Geology and Soil Landscape

Regional geological information was reviewed for the investigation. The information was sourced from the Lotsearch report attached in the appendices. The report indicates that the hospital site is underlain by Ashfield Shale of the Wianamatta Group, which typically consists of black to dark grey shale and laminite.

A review of the soil landscape information presented in the Lotsearch report indicates that the hospital site is located within the Blacktown soil landscape. Blacktown soils are characterised by moderate erodibility with some higher local occurrences, low dispersivity and localised areas of moderate salinity.

2.12 Dryland Salinity Potential of Western Sydney

The hospital site is located within the area of Western Sydney included in the Salinity Potential Map prepared by the Department of Infrastructure, Planning and Natural Resources (DIPNR). Based upon interpretation from the geological formations and soil groups presented on the map, the site is located in a region of moderate salinity potential.

The moderate classification is attributed to scattered areas of scalding and indicator vegetation, in areas where concentrations have not been mapped. Saline areas may occur in this zone, which have not been identified or may occur if risk factors change adversely.

Reference should be made to the JKE dryland salinity report for further information (see Section 2.1).

2.13 Acid Sulfate Soil (ASS) Risk and Management

The site is not located in an ASS risk area according to the risk maps prepared by the Department of Land and Water Conservation.

Reference should be made to the JKE dryland salinity and ASS report for further information (see Section 2.1).

2.14 Hydrogeology

Hydrogeological information presented in the Lotsearch report indicated that the regional aquifer on-site and in the areas immediately surrounding the site includes porous, extensive aquifers of low to moderate productivity. There was a total of eight registered bores within the report buffer of 2,000m. In summary:

- The nearest registered bore was located approximately 245m from the hospital site. This was utilised for monitoring purposes;
- The majority of the bores were registered for monitoring purposes;
- There were no nearby bores (i.e. within 1,000m) registered for domestic or irrigation uses; and

- The drillers log information from the closest registered bores typically identified fill residual clays underlain by shallow siltstone and/or sandstone bedrock. Standing water levels (SWLs) in the bores within 500m from the site ranged from approximately 4.5mBGL to 20mBGL.

The hospital site consists of relatively low permeability (residual) soils overlying shallow bedrock. The potential for viable groundwater abstraction and use of groundwater under these conditions is considered to be low. There is a reticulated water supply in the area and consumption of groundwater is not expected to occur. Use of groundwater is not proposed as part of the development.

2.15 Receiving Water Bodies

Surface water drainage across the hospital site is expected to flow towards the south/south-east in sympathy with the overall topography of the site.

A review of the historical aerial photographs presented in the Lotsearch report indicate that there have not been any naturally occurring water bodies present on hospital site. Several small man-made dams were historically located on the site and surrounding area between 1950s to 1990s, and were utilised for irrigation purposes on the former golf course. They were drained and backfilled prior to the development of the site and wider surrounds associated with the Rouse Hill Town Centre and Regional Centre precincts.

Surface water bodies were not identified at the hospital site during the inspection. The site is located approximately 500m to the west of Caddies Creek.

2.16 Summary of Site History Information

A review of historical information presented in the provided reports (discussed in Section 2.1) and the historical aerial photographs presented in the Lotsearch report was undertaken for the DSI. The review identified the following:

- Prior to the 1970s, the hospital site was predominantly vacant and grassed. The site was likely used for agricultural (grazing) purposes;
- The hospital site was utilised as a golf course from at least 1970 to circa 1994;
- The hospital site has remained vacant since circa 1994; and
- The substation located in the north section of the hospital site was constructed between 2006 and 2014.

3 CONCEPTUAL SITE MODEL

NEPM (2013) defines a CSM as a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM for the site is presented in the following sub-sections and is based on the site information (including the site inspection information) and the review of site history information. Reference should also be made to the figures attached in the appendices.

A review of the CSM in relation to source, pathway and receptor (SPR) linkages has been undertaken as part of the Tier 1 risk assessment process, as outlined in Section 7.

3.1 Potential Contamination Sources/AEC and CoPC

The potential contamination sources/AEC and CoPC are presented in the following table:

Table 3-1: Potential (and/or known) Contamination Sources/AEC and Contaminants of Potential Concern

Source / AEC	CoPC
Fill material – The hospital site appears to have been historically filled to achieve the existing levels. The previous investigations identified fill at the site. The fill may have been imported from various sources and could be contaminated. The CSM presented in the JBS&G DSI identified the presence of stockpiles of unknown origin and fly tipping/dumped material at the hospital site as discussed in Section 2.1. However, subsequent investigations undertaken by JKE for the SDIS and this investigation did not identify any such material at the hospital site indicating that the material has been moved off-site.	Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), petroleum hydrocarbons (referred to as total recoverable hydrocarbons – TRHs), benzene, toluene, ethylbenzene and xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), organophosphate pesticides (OPPs), polychlorinated biphenyls (PCBs) and asbestos.
Historical golf course use – The hospital site has been historically used as a golf course. This landuse could have resulted in contamination across the site via use of machinery, application of pesticides and building/ demolition of various structures. Irrigation pipes made from asbestos cement are also associated with this AEC. JKE note that the former asbestos pipe shown on the JBS&G DSI plans and discussed in the CSM was removed and validated by EIS in 2006. However, there is potential for other unidentified sections of pipes that could have remained on hospital site.	Heavy metals, TRH, PAHs, OCPs, PCBs and asbestos JKE note that OCPs only became commercially available in the 1940s. Prior to this time pesticides were predominantly heavy metal compounds.
Off-site Substation – An electrical substation is located in the north section of the hospital site. The substation is relatively new constructed between 2006 and 2014. The landuse is listed on the NEMP 2025 as an activity that could have used PFAS for fire related incidences. Hence, for completeness, this landuse has been included as a potential off-site contamination source in the CSM.	PFAS may be associated with firefighting activities.

JKE note that herbicides have not been included as CoPC as herbicides are not commonly found at residual concentrations likely to pose a risk to human health or the environment (NSW DEC 2005, *Guidelines for Assessing Former Orchards and Market Gardens*).

3.2 Mechanism for Contamination, Affected Media, Receptors and Exposure Pathways

The mechanisms for contamination, affected media, receptors and exposure pathways relevant to the potential contamination sources/AEC are outlined in the following CSM table:

Table 3-2: CSM

Potential mechanism for contamination	The potential mechanisms for contamination are most likely to include 'top-down' impacts and spills. There is a potential for sub-surface releases to have occurred if deep fill (or other buried infrastructure) is present, although this is considered to be the least likely mechanism for contamination. The mechanisms for contamination from off-site sources could have occurred via 'top down' impacts and spills, or sub-surface release. Impacts to the hospital site could occur via the migration of contaminated groundwater.
Affected media	Soil and groundwater have been identified as potentially affected media.
Receptor identification	Human receptors include site users in a commercial setting of a hospital, construction workers and intrusive maintenance workers. Off-site human receptors include adjacent land users. Ecological receptors include terrestrial organisms and plants within unpaved areas (including the proposed landscaped areas), and freshwater ecology in Caddies Creek.
Potential exposure pathways	Potential exposure pathways relevant to the human receptors include ingestion, dermal absorption and inhalation of dust (all contaminants) and vapours (volatile TRH, naphthalene and BTEX). The potential for exposure would typically be associated with the construction and excavation works, and future use of the site. Potential exposure pathways for ecological receptors include primary/direct contact and ingestion. Exposure during future site use could occur via direct contact with soil in unpaved areas such as gardens, inhalation of airborne asbestos fibres during soil disturbance, or inhalation of vapours within enclosed spaces such as buildings and basements. Exposure to groundwater is unlikely to occur in Caddies Creek through direct migration, however groundwater has the potential to enter the creek via the stormwater system (which is expected to discharge into the creek) during development works, e.g. if construction-phase dewatering is required.
Potential exposure mechanisms	The following have been identified as potential exposure mechanisms for site contamination: • Vapour intrusion into the proposed basement and/or building (either from soil contamination or volatilisation of contaminants from groundwater); • Contact (dermal, ingestion or inhalation) with exposed soils in landscaped areas and/or unpaved areas; and • Migration of groundwater off-site and into nearby water bodies including aquatic ecosystems.

Presence of preferential pathways for contaminant movement	The HV electrical services (see BYDA plans in the appendices) and the associated trench/trench backfill is a potential preferential pathway for contaminant migration. This could occur via groundwater/seepage if present, or via soil/vapour migration through the sewer and/or trench backfill.

4 SAMPLING, ANALYSIS AND QUALITY PLAN

4.1 Data Quality Objectives (DQO)

Data Quality Objectives (DQOs) were developed to define the type and quality of data required to achieve the project objectives outlined in Section 1.1. The DQOs were prepared with reference to the process outlined in Schedule B2 of NEPM (2013). The seven-step DQO approach for this project is outlined in the following sub-sections.

The DQO process is validated in part by the Data Quality Assurance/Quality Control (QA/QC) Evaluation. The Data (QA/QC) Evaluation is summarised in Section 8.1 and the detailed evaluation is provided in the appendices.

4.1.1 Step 1 - State the Problem

The CSM identified potential sources of contamination/AEC at the site that may pose a risk to human health and the environment. Investigation data is required to assess the contamination status of the site, assess the risks posed by the contaminants in the context of the proposed development/intended land use, and assess whether remediation is required. This information will be considered by the consent authority in exercising its planning functions in relation to the development proposal.

Confirmation of the waste classification for off-site disposal of excavated soil/bedrock is required.

The DQOs were developed by the author of this report and checked by the reviewer. Both the author and reviewer were joint decision-makers in relation to Step 2 of the DQO process.

4.1.2 Step 2 - Identify the Decisions of the Study

The objectives of the investigation are outlined in Section 1.1. The decisions to be made reflect these objectives and are as follows:

- Did the site inspection, or does the historical information identify potential contamination sources/AEC at the site?
- Are any results above the SAC?
- Do potential risks associated with contamination exist, and if so, what are they?
- Is remediation required?
- Is the site characterisation sufficient to provide adequate confidence in the above decisions?
- Is the site suitable for the proposed development, or can the site be made suitable subject to further characterisation and/or remediation?

4.1.3 Step 3 - Identify Information Inputs

The primary information inputs required to address the decisions outlined in Step 2 include the following:

- Existing relevant environmental data from previous reports;
- Site information, including site observations and site history documentation;
- Sampling of potentially affected media, including soil and groundwater;

- Observations of sub-surface variables such as soil type, photo-ionisation detector (PID) concentrations, odours and staining, and groundwater physiochemical parameters;
- Laboratory analysis of soils and groundwater for the CoPC identified in the CSM; and
- Field and laboratory QA/QC data.

4.1.4 Step 4 - Define the Study Boundary

The sampling will be confined to the main hospital site boundaries as shown in Figure 2a and will be limited vertically to a depth of approximately 3mBGL (spatial boundary). The sampling was completed between 22 and 25 July 2025 (temporal boundary). The assessment of potential risk to adjacent land users has been made based on data collected within the site boundary.

JKE note that prior to the commencement of the DSI, two areas were not accessible due to the ongoing archaeological investigations. These areas are shown on Figures 2 and 2a. They have not been identified as data gaps in this DSI as the areas were subject to testing during the previous investigations undertaken by JKE and JBS&G as outlined in Section 2.1.

4.1.5 Step 5 - Develop an Analytical Approach (or Decision Rule)

4.1.5.1 Tier 1 Screening Criteria

The laboratory data will be assessed against relevant Tier 1 screening criteria (referred to as SAC), as outlined in Section 5. Exceedances of the SAC do not necessarily indicate a requirement for remediation or a risk to human health and/or the environment. Exceedances are considered in the context of the CSM and valid SPR-linkages.

Where appropriate, data are assessed against valid statistical parameters to characterise the data population. This may include calculation and application of mean values and/or 95% upper confidence limit (UCL) values for the data set, with regards to the NEPM (2013) framework and other relevant guidelines made under the CLM Act 1997. UCLs are considered acceptable where the UCL is below the SAC, the standard deviation of the data is less than 50% of the SAC and none of the individual concentrations are more than 250% of the SAC.

For this investigation, the following decision rules will apply:

- If all CoPC (with the exception of asbestos) concentrations are below the SAC, then the data will be compared directly to the SAC without statistical analysis;
- For soil data, if any individual CoPC (with the exception of asbestos) concentration is above the SAC, then statistical analysis will be undertaken. This will include calculation of the 95% upper confidence limit (UCL) value for the data set, with regards to the NEPM (2013) framework and other relevant guidelines made under the CLM Act 1997. The UCL will be considered acceptable where the UCL is below the SAC, the standard deviation of the data is less than 50% of the SAC and none of the individual concentrations are more than 250% of the SAC;
- If asbestos concentrations are encountered above the SAC or in the top 100mm of soil, then asbestos will be deemed a contaminant of concern for remediation purposes; and

- Groundwater data will be compared directly to the SAC and evaluated with regards to valid/complete SPR-linkages.

4.1.5.2 Field and Laboratory QA/QC

Field QA/QC included analysis of inter-laboratory duplicates, intra-laboratory duplicates, trip spikes, trip blanks and rinsate samples. Further details regarding the sampling and analysis undertaken, and the acceptable limits adopted, is provided in the Data Quality (QA/QC) Evaluation in the appendices.

The suitability of the laboratory data is assessed against the laboratory QA/QC criteria which is outlined in the attached laboratory reports. These criteria were developed and implemented in accordance with the laboratory's National Association of Testing Authorities, Australia (NATA) accreditation and align with the acceptable limits for QA/QC samples as outlined in NEPM (2013) and other relevant guidelines.

In the event that acceptable limits are not met by the laboratory analysis, other lines of evidence are reviewed (e.g. field observations of samples, preservation, handling etc) and, where required, consultation with the laboratory is undertaken in an effort to establish the cause of the non-conformance. Where uncertainty exists, JKE typically adopt the most conservative concentration reported (or in some cases, consider the data from the affected sample as an estimate).

4.1.5.3 Appropriateness of Practical Quantitation Limits (PQLs)

The PQLs of the analytical methods are considered in relation to the SAC to confirm that the PQLs are less than the SAC. In cases where the PQLs are greater than the SAC, a discussion of this is provided.

4.1.6 Step 6 – Specify Limits on Decision Errors

To limit the potential for decision errors, a range of quality assurance processes are adopted. A quantitative assessment of the potential for false positives and false negatives in the analytical results is undertaken with reference to Schedule B(3) of NEPM (2013) using the data quality assurance information collected.

Decision errors can be controlled through the use of hypothesis testing. The test can be used to show either that the baseline condition is false or that there is insufficient evidence to indicate that the baseline condition is false. The null hypothesis is an assumption that is assumed to be true in the absence of contrary evidence. For this investigation, the null hypothesis has been adopted which is that, there is considered to be a complete SPR linkage for the CoPC identified in the CSM unless this linkage can be proven not to (or unlikely to) exist. The null hypothesis has been adopted for this investigation.

Decision errors can be controlled through the use of hypothesis testing. The test can be used to show either that the baseline condition is false or that there is insufficient evidence to indicate that the baseline condition is false. The null hypothesis is an assumption that is assumed to be true in the absence of contrary evidence. For this investigation, the null hypothesis (H_0) is that the 95% UCL for the CoPC is greater than the SAC. The alternative hypothesis (H_A) is that the 95% UCL for the CoPC is less than the SAC. Alternative considerations are made regarding asbestos based on an assessment of multiple lines of evidence.

Potential outcomes include Type I and Type II errors as follows:

- Type I error of determining that the soil is acceptable for the proposed land use when it is not (wrongly rejects true H_0), includes an alpha (α) risk of 0.05; and
- Type II error of determining that the soil is unacceptable for the proposed land use when it is (wrongly accepts false H_0), includes beta (β) risk of 0.2.

UCLs will be considered acceptable where the UCL is below the SAC, the standard deviation of the data is less than 50% of the SAC and none of the individual concentrations are more than 250% of the SAC. However, where statistical analysis is applied in accordance with Step 5 via the calculation of UCL values, the potential for decision errors to occur will also be evaluated using the Combined Risk Value (CRV) method as outlined in Appendix E of the NSW EPA Sampling Design Part 1 – Application (2022)[19] contaminated land guidelines. The CRV method will be used retrospectively to establish whether there is sufficient statistical power in the UCL.

Statistical analysis will not apply to asbestos or groundwater data, therefore these data will be assessed based on a multiple lines of evidence and risk-based approach.

Data Quality Indicators (DQI) for field and laboratory QA/QC samples are defined in the QA/QC Data Evaluation in the appendices. An assessment of the DQI's was made in relation to precision, accuracy, representativeness, completeness and comparability.

4.1.7 Step 7 - Optimise the Design for Obtaining Data

The most resource-effective design will be used in an optimum manner to achieve the investigation objectives. Adjustment of the investigation design can occur following consultation or feedback from project stakeholders. For this investigation, the design was optimised via consideration of the various lines of evidence used to select the sample locations, the media being sampled, and also by the way in which the data were collected.

The sampling plan and methodology are outlined in the following sub-sections.

4.2 Soil Sampling Plan and Methodology

The soil sampling plan and methodology adopted for this investigation is outlined in the table below:

Table 4-1: Soil Sampling Plan and Methodology

Aspect	Input
Sampling Density	Samples were obtained from 32 locations as shown on the attached Figure 2a. This number of locations met the minimum sampling density for hotspot identification, as outlined in the NSW EPA Sampling Design Part 1 – Application (2022)[20] contaminated land guidelines. Based on the above density and the sampling plan (See below), the following hotspot diameters have been calculated: • Circular hotspot diameter with a 95% confidence level (K value of 0.59) – 33m; and • Elliptical hotspot diameter with a 95% confidence level (K value of 0.9) – 25.2m along the short dimension and 50.4m along the long dimension.

[19] NSW EPA, (2022). *Sampling design part 1 - application.* (referred to as EPA Sampling Design Guidelines 2022)

[20] NSW EPA, (2022). *Sampling design part 1 - application.* (referred to as EPA Sampling Design Guidelines 2022)

Aspect	Input
Sampling Plan	The sampling locations were placed on a systematic plan with a grid spacing of approximately 28m between sampling location. A systematic plan was considered suitable to identify hotspots to a 95% confidence level and calculate UCLs for specific data populations (UCLs were only applied were appropriate and in accordance with the DQOs). However, it is noted that this hotspot approach has limited application for assessing asbestos which can be identified in clusters and isolated locations as ACM in soil. Hence the reason for also considering other lines of evidence in assessing the likelihood of asbestos posing a risk.
Set-out and Sampling Equipment	Sampling locations were set out using a differential GPS unit (DGPS) (with an accuracy of approximately ±50mm). In-situ sampling locations were checked for underground services by an external contractor prior to sampling. Samples were collected using an excavator. Samples were obtained from the test pit walls or directly from the bucket by hand. Where sampling occurred from the bucket, JKE collected samples from the central portion of large soil clods, or from material that was unlikely to have come into contact with the bucket.
Sample Collection and Field QA/QC	Soil samples were obtained from 22 to 25 July 2025 in accordance with our standard field procedures. Soil samples were collected from the fill and natural profiles based on field observations. The sample depths are shown on the logs attached in the appendices. Samples for contamination testing (except for PFAS analysis) were placed in glass jars with plastic caps and teflon seals with minimal headspace. Samples for asbestos analysis were placed in zip-lock plastic bags. During sampling, soil at selected depths was split into primary and duplicate samples for field QA/QC analysis. The field splitting procedure included alternately filling the sampling containers to obtain a representative split sample.
Field Screening	A portable Photoionisation Detector (PID) fitted with a 10.6mV lamp was used to screen the samples for the presence of volatile organic compounds (VOCs). PID screening for VOCs was undertaken on soil samples using the soil sample headspace method. VOC data was obtained from partly filled zip-lock plastic bags following equilibration of the headspace gases. PID calibration records are maintained on file by JKE. The field screening for asbestos quantification included the following: • A representative 10L sample was collected from fill at 1m intervals, or from each distinct fill profile. The bulk sample intervals are shown on the attached test pit logs; • Each 10L sample was weighed using an electronic scale; • Each bulk sample was passed through a sieve with a 7.1mm aperture and inspected for the presence of fibre cement; • The condition of fibre cement or any other suspected asbestos materials was noted on the field records; and • If observed, any fragments of fibre cement in the 10L sample were collected, placed in a zip-lock bag and assigned a unique identifier. Calculations for asbestos content were undertaken based on the requirements outlined in Schedule B1 of NEPM (2013), as summarised in Section 5.1. Calibration/check records are maintained on file by JKE. The scale used to weigh the 10L samples was not calibrated, however this is not considered significant as this method of providing a weight for the bulk sample is considered to be considerably more accurate than applying a nominal soil density conversion.

Aspect	Input
Decontamination and Sample Preservation	Sampling personnel used disposable nitrile gloves during sampling activities. Re-usable sampling equipment was decontaminated using potable water. For PFAS sampling, re-usable sampling equipment will be decontaminated using potable water (with rags), followed by a rinse with potable water. Detergents (such as Decon 90) were not used during the decontamination process as they may result in interference during PFAS analysis. Soil samples were preserved by immediate storage in an insulated sample container with ice. On completion of the fieldwork, the samples were stored temporarily in fridges in the JKE warehouse before being delivered in the insulated sample container to a NATA registered laboratory for analysis under standard chain of custody (COC) procedures.

4.3 Groundwater Sampling Plan and Methodology

The groundwater sampling plan and methodology is outlined in the table below:

Table 4-2: Groundwater Sampling Plan and Methodology

Aspect	Input
Sampling Plan	Groundwater samples were obtained from 6 existing groundwater monitoring wells including MW1, MW4 and MW6 (installed in June 2022) and MW102, MW103, and MW109 (installed in July 2024). The well locations are shown on Figure 2a. The wells were positioned to establish baseline groundwater conditions at the site. Considering the topography and the location of the nearest down-gradient water body, MW1 and MW102 are considered to be in the up-gradient area of the site and would be expected to provide an indication of groundwater flowing onto (beneath) the site from the north. MW103 and MW4 were positioned in the middle section of the site and MW6 and MW109 were positioned in the south section, and both would be expected to provide an indication of groundwater flowing across (beneath) the site and beyond the down-gradient site boundaries.
Monitoring Well Installation Procedure	The monitoring well construction details are documented on the appropriate borehole logs attached in the appendices. The monitoring wells were installed to depths of approximately 7.24m to 8.87mBGL. The wells were generally constructed as follows: • 50mm diameter Class 18 PVC (machine slotted screen) was installed in the lower section of the well to intersect groundwater; • 50mm diameter Class 18 PVC casing was installed in the upper section of the well (screw fixed); • A 2mm sand filter pack was used around the screen section for groundwater infiltration; • A hydrated bentonite seal/plug was used on top of the sand pack to seal the well; and • A gatic cover was installed at the surface with a concrete plug to limit the inflow of surface water. The monitoring well installation, including the screen lengths, were considered suitable for assessment of general groundwater quality with regards to Table 5 in Schedule B2 of NEPM 2013.
Monitoring Well Development	The monitoring wells were developed on 22 July 2025 using a submersible electrical pump. Due to the hydrogeological conditions, groundwater inflow into the wells was relatively low, therefore the wells were pumped until they were effectively dry.
Groundwater Sampling	The monitoring wells were allowed to recharge for approximately six to seven days after development. Groundwater samples were obtained on 29 July 2025.

Aspect	Input
	Prior to sampling, the monitoring wells were checked for the presence of Light Non-Aqueous Phase Liquids (LNAPLs) using an inter-phase probe electronic dip meter. The monitoring well head space was checked for VOCs using a calibrated PID unit. The samples were obtained using a peristaltic pump and disposable plastic bailer. During sampling, the following parameters were monitored using calibrated field instruments: • SWL using an electronic dip meter; and • pH, temperature, electrical conductivity (EC), dissolved oxygen (DO) and redox potential (Eh) using a YSI Multi-probe water quality meter. Steady state conditions were considered to have been achieved when the difference in the pH measurements was less than 0.2 units, the difference in conductivity was less than 10%, and when the SWL was not in drawdown. During sampling, steady state conditions were achieved in MW6 and MW102. The remaining wells encountered dropping SWL conditions due to slow recharge. Groundwater samples were obtained directly from the single use PVC tubing and placed in the sample containers. Duplicate samples were obtained by alternate filling of sample containers. This technique was adopted to minimise disturbance of the samples and loss of volatile contaminants associated with mixing of liquids in secondary containers, etc. The field monitoring record and calibration data are attached in the appendices.
Decontaminant and Sample Preservation	During development, the pump was flushed between monitoring wells with potable water (single-use tubing was used for each well). The pump tubing was discarded after each sampling event and replaced therefore no decontamination procedure was considered necessary. Rinsate samples were obtained during the decontamination process as part of the field QA/QC. The samples were preserved with reference to the analytical requirements and placed in an insulated container with ice or ice bricks. On completion of the fieldwork, the samples were temporarily stored in a fridge at the JKE office, before being delivered in the insulated sample container to a NATA registered laboratory for analysis under standard COC procedures.

4.3.1 Laboratory Analysis

Samples were analysed by an appropriate, NATA Accredited laboratory using the analytical methods detailed in Schedule B(3) of NEPM 2013. Reference should be made to the laboratory reports attached in the appendices for further details.

Table 4-3: Laboratory Details

Samples	Laboratory	Report Reference
All primary samples and field QA/QC samples including (intra- laboratory duplicates, trip blanks, trip spikes and field rinsate samples)	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	386894, 386894-A, 386894-B, 387235
Inter-laboratory duplicates	Envirolab Services Pty Ltd VIC, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	MGG0474

5 SITE ASSESSMENT CRITERIA (SAC)

The SAC were derived from the NEPM 2013 and other guidelines as discussed in the following sub-sections. The guideline values for individual contaminants are presented in the attached report tables and further explanation of the various criteria adopted is provided in the appendices.

5.1 Soil

Soil data were compared to relevant Tier 1 screening criteria in accordance with NEPM (2013) as outlined below.

5.1.1 Human Health

- Health Investigation Levels (HILs) for a 'commercial/industrial' exposure scenario (HIL-D). JKE note that although the land use Type D SAC do not consider the most sensitive receptors (i.e. children), the majority of the site will be paved and any use of the site by these receptors would be infrequent and of short duration. On that basis we are of the opinion that land use Type D is appropriate for this project for Tier 1 screening purposes;
- Health Screening Levels (HSLs) for a 'commercial/industrial' exposure scenario (HSL-D). HSLs were calculated based on conservative assumptions including a 'sand' type and a depth interval of 0m to 1m;
- HIL-D criteria were adopted for PFAS assessment based on Table 5 in NEMP 2025;
- HSLs for direct contact presented in the CRC Care Technical Report No. 10 – Health screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document (2011)[21]; and
- Asbestos was assessed against the HSL-D criteria. A summary of the asbestos criteria is provided in the table below:

Table 5-1: Details for Asbestos SAC

Guideline	Applicability
Asbestos in Soil	The HSL-D criteria were adopted for the assessment of asbestos in soil. The SAC adopted for asbestos were derived from the NEPM 2013 and are based on the Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2021)[22]. The SAC include the following: • No visible asbestos at the surface/in the top 10cm of soil; • <0.05% w/w bonded asbestos containing material (ACM) in soil; and • <0.001% w/w asbestos fines/fibrous asbestos (AF/FA) in soil. Concentrations for bonded ACM concentrations in soil are based on the following equation which is presented in Schedule B1 of NEPM (2013): $$\text{\% w/w asbestos in soil} = \frac{\text{\% asbestos content x bonded ACM (kg)}}{\text{Soil volume (L) x soil density (kg/L)}}$$ However, we are of the opinion that the actual soil volume in a 10L bucket varies considerably due to the presence of voids, particularly when assessing cohesive soils. Therefore, each

[21] Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC Care), (2011). Technical Report No. 10 - *Health screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document*

[22] Western Australian (WA) Department of Health (DoH), (2021). *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*. (referred to as WA DoH 2021)

Guideline	Applicability
	bucket sample was weighed using electronic scales and the above equation was adjusted as follows (we note that the units have also converted to grams): **% w/w asbestos in soil =** $\frac{\text{**% asbestos content x bonded ACM (g)**}}{\text{Soil weight (g)}}$

5.1.2 Environment (Ecological – terrestrial ecosystems)

- Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) for a 'commercial/industrial' exposure scenario. These have only been applied to the top 2m of soil as outlined in NEPM (2013). The criterion for benzo(a)pyrene has been increased from the value presented in NEPM (2013) based on the Canadian Soil Quality Guidelines[23];
- ESLs were adopted based on the 'coarse' soil type for all samples as a conservative approach;
- The ecological (indirect exposure) guidelines for soil were adopted for PFAS assessment based on Table 6 in NEMP 2025; and
- EILs for selected metals were calculated based on the most conservative added contaminant limit (ACL) values presented in Schedule B(1) of NEPM (2013) and published ambient background concentration (ABC) values presented in the document titled Trace Element Concentrations in Soils from Rural and Urban Areas of Australia (1995)[24]. This method is considered to be adequate for the Tier 1 screening.

5.1.3 Management Limits for Petroleum Hydrocarbons

Management limits for petroleum hydrocarbons (as presented in Schedule B1 of NEPM 2013) were considered.

5.2 Groundwater

Groundwater data were compared to relevant Tier 1 screening criteria in accordance with NEPM (2013), following an assessment of environmental values in accordance with the Guidelines for the Assessment and Management of Groundwater Contamination (2007)[25]. Environmental values for this investigation include aquatic ecosystems, human uses (incidental contact and recreational water use), and human-health risks in non-use scenarios (vapour intrusion).

5.2.1 Human Health

- The NEPM (2013) HSLs were not applicable for this project as the groundwater was recorded at depths shallower than 2m. On this basis, JKE have undertaken a site-specific assessment (SSA) for the Tier 1 screening of human health risks posed by volatile contaminants in groundwater. The assessment included selection of alternative Tier 1 criteria that were considered suitably protective of human

[23] Canadian Council of Ministers of the Environment, (1999). *Canadian soil quality guidelines for the protection of environmental and human health: Benzo(a)Pyrene (1997)* (referred to as the Canadian Soil Quality Guidelines)

[24] Olszowy, H., Torr, P., and Imray, P., (1995), *Trace Element Concentrations in Soils from Rural and Urban Areas of Australia. Contaminated Sites Monograph Series No. 4*. Department of Human Services and Health, Environment Protection Agency, and South Australian Health Commission

[25] NSW Department of Environment and Conservation, (2007). *Guidelines for the Assessment and Management of Groundwater Contamination.*

health. These criteria are based on drinking water guidelines and have been referred to as HSL-SSA. The criteria were based on the following (as shown in the attached report tables):

- Australian Drinking Water Guidelines 2011 (updated 2025)[26] for BTEX compounds and selected VOCs;
- World Health Organisation (WHO) document titled Petroleum Products in Drinking-water, Background document for the development of WHO Guidelines for Drinking Water Quality (2008)[27] for petroleum hydrocarbons. We have conservatively adopted the value of 100µg/L for TRH F1 and F2;
- USEPA Region 9 screening levels for naphthalene (threshold value for tap water); and
- The use of the laboratory PQLs for other contaminants where there were no Australian guidelines.

- The ADWG 2025 were multiplied by a factor of 10 to assess potential risks associated with incidental/recreational-type exposure to groundwater (e.g. within down-gradient water bodies or with seepage during excavations for the development). These have been deemed as 'recreational' SAC; and
- The recreational water quality guideline value was adopted for PFAS assessment based on Table 4 in NEMP 2025.

5.2.2 Environment (Ecological - aquatic ecosystems)

Groundwater Investigation Levels (GILs) for 95% protection of freshwater species were adopted based on the Default Guideline Values in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2018)[28]. The 99% trigger values were adopted where required to account for bioaccumulation. Low and moderate reliability trigger values were also adopted for some contaminants where high-reliability trigger values don't exist.

The ecological (freshwater) water quality guidelines were adopted for PFAS assessment based on NEMP 2025, based on 99% protection to factor in potential bioaccumulation.

[26] National Health and Medical Research Council (NHMRC), (2021). *National Water Quality Management Strategy, Australian Drinking Water Guidelines 2011* (referred to as ADWG 2011)

[27] World Health Organisation (WHO), (2008). *Petroleum Products in Drinking-water, Background document for the development of WHO Guidelines for Drinking Water Quality* (referred to as WHO 2008)

[28] Australian and New Zealand Governments (ANZG), (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia (referred to as ANZG 2018)

6 RESULTS

6.1 Summary of Data (QA/QC) Evaluation

The data evaluation is presented in the appendices. In summary, JKE is of the opinion that the data are adequately precise, accurate, representative, comparable and complete to serve as a basis for interpretation to achieve the investigation objectives.

6.2 Subsurface Conditions

A summary of the subsurface conditions encountered during the investigation is presented in the following table. Reference should be made to the test pit logs attached in the appendices for further details.

Table 6-1: Summary of Subsurface Conditions

Profile	Description
Fill	Fill was encountered at the surface in all test pits and extended to depths of approximately 0.1mBGL in TP514 to 2.8mBGL in TP510. TP510 was terminated in the fill at a maximum depth of approximately 2.8mBGL. The fill typically comprised silty clay, silty gravel, silty clayey gravel, and silty clayey sand with inclusions of igneous, siltstone, sandstone and ironstone gravel, roots and root fibres, ash, slag, and fragments (including plastic, concrete, ceramic, tile, asphaltic concrete (AC), and geofabric). No staining or odours were identified in the fill during the investigation.
Natural Soil	Natural soil was encountered beneath the fill in the majority of the test pits excavated for the DSI. Silty clay was encountered at depths ranging from approximately 0.1mBGL at TP514 to 1.2mBGL at TP503. The natural soil included trace of ironstone gravel and root fibres.
Bedrock	Extremely weathered siltstone was encountered in selected test pits immediately beneath the fill or the natural soil at depths ranging from approximately 0.3mBGL at TP519 to 1.9mBGL at TP506.
Groundwater	Groundwater seepage was encountered in TP530 at a depth of approximately 1.1mBGL. All other test pit locations were recorded as dry on completion. SWL recorded in the monitoring wells installed at the hospital site is discussed in Section 6.3.

6.3 Field Screening

A summary of the field screening results is presented in the following table:

Table 6-2: Summary of Field Screening

Aspect	Details
PID Screening of Soil Samples for VOCs	PID results ranged from 0ppm to 3.1ppm. The highest PID results were identified in samples from TP501. These results indicate a general lack of PID detectable VOCs.

Aspect	Details
Bulk Screening for Asbestos	The bulk field screening results are summarised in the attached report Table S5. No ACM was encountered during the field screening at any locations during this investigation.
Groundwater Depth & Flow	Groundwater seepage was encountered in test pit TP530 during excavation at a depth of approximately 1.1mBGL. The remaining test pits were dry during excavation. SWLs measured in the monitoring wells installed at the site ranged from approximately 1.53mBGL to 6.4mBGL. Groundwater RLs calculated on these measurements ranged from 47.11m to 51.33m RL. A contour plot was previously prepared for the groundwater levels encountered at the hospital site as part of the SGIA discussed in Section 2.1. The contour plot indicated that groundwater generally flows towards the south and south-east.
Groundwater Field Parameters	Field measurements recorded during sampling were as follows: - pH ranged from 5.29 to 7.08; - EC ranged from 1162µS/cm to 5280µS/cm; - Eh ranged from -246.0mV to -100.9mV; and - DO ranged from 0.21ppm to 4.69ppm. The PID readings in the monitoring well headspace recorded during sampling ranged from 0ppm in MW4 and MW102, to 0.3ppm in MW6 and MW109.
LNAPLs petroleum hydrocarbons	Phase separated product (i.e. LNAPL) was not detected using the interphase probe during groundwater sampling.

6.4 Soil Laboratory Results

The soil laboratory results were assessed against the SAC presented in Section 5.1. Individual SAC are shown in the report tables attached in the appendices. A summary of the results is presented below:

6.4.1 Human Health and Environmental (Ecological) Assessment

Table 6-3: Summary of Soil Laboratory Results – Human Health and Environmental (Ecological)

Analyte	N	Max. (mg/kg)	N> Human Health SAC	N> Ecological SAC	Comments
Arsenic	56	30	-	-	-
Cadmium	56	<0.04	-	NSL	-
Chromium (total)	56	34	-	-	-
Copper	56	44	-	-	-
Lead	56	69	-	-	-
Mercury	56	0.5	-	NSL	-
Nickel	56	33	-	-	-

Analyte	N	Max. (mg/kg)	N> Human Health SAC	N> Ecological SAC	Comments
Zinc	56	110	-	-	-
Total PAHs	56	5.5	-	NSL	-
Benzo(a)pyrene	56	0.56	NSL	-	-
Carcinogenic PAHs	56	0.8	-	NSL	-
Naphthalene	56	<1	-	NSL	-
DDT+DDE+DDD	42	<0.1	-	NSL	-
DDT	42	<0.1	NSL	-	-
Aldrin and dieldrin	42	<0.1	-	NSL	-
Chlordane	42	<0.1	-	NSL	-
Heptachlor	42	<0.1	-	NSL	-
Chlorpyrifos (OPP)	42	<0.1	-	NSL	-
PCBs	41	1.2	-	NSL	JKE note that fill sample TP521 (0-0.1m) detected a total PCBs concentration of 1.2mg/kg, which was below the SAC of 7 mg/kg. A field duplicate/replicate sample SDUP503 (0-0.1m) obtained from the same fill profile was analysed for total PCBs. The result was less than the laboratory detection limit (PQL). Indicating that the primary result was an anomaly. An underlying natural soil sample TP521 (0.4-0.5m) was also analysed for total PCBs and all of results were below the SAC. TP521 is located in the central section of the hospital site as shown on Figure 2a. No point sources of PCBs were identified during the DSI or the previous investigations undertaken at the site. The result is discussed further in the Tier 1 risk assessment in Section 7.1.
TRH F1	56	<25	-	-	-
TRH F2	56	<50	-	-	-

Analyte	N	Max. (mg/kg)	N> Human Health SAC	N> Ecological SAC	Comments
TRH F3	56	310	-	-	-
TRH F4	56	420	-	-	-
Benzene	56	<0.2	-	-	-
Toluene	56	<0.5	-	-	-
Ethylbenzene	56	<1	-	-	-
Xylenes	56	<1	-	-	-
PFOS	11	0.9	NSL	-	-
PFOS + PFHxS	11	0.9	-	NSL	-
PFOA	11	1.2	-	-	-
Asbestos (in soil) (%w/w)	32	No Detection	-	NA	-

Notes:

N: Total number of samples including primary, field duplicate and laboratory duplicate samples

NSL: No set limit

NL: Not limiting

6.4.2 Statistical Analysis

Statistical calculations were not undertaken on the soil samples as all of the results were below the SAC.

6.5 Groundwater Laboratory Results

The groundwater laboratory results were assessed against the SAC presented in Section 5.2. Individual SAC are shown in the report tables attached in the appendices. A summary of the results is presented below:

Table 6-4: Summary of Groundwater Laboratory Results – Human Health and Environmental (Ecological)

Analyte	N	Max. (µg/L)	N> Human Health SAC	N> Ecological SAC	Comments
Arsenic	9	3	-	-	-
Cadmium	9	0.1	-	-	-
Chromium (total)	9	<1	-	-	-
Copper	9	2	-	1	Groundwater sample MW4 encountered a copper concentration of 2µg/L above the ecological SAC of 1.4µg/L.
Lead	9	<1	-	-	-

Analyte	N	Max. (µg/L)	N> Human Health SAC	N> Ecological SAC	Comments
Mercury	9	<0.05	-	-	-
Nickel	9	24	-	5	Groundwater samples MW4, MW6, MW102 and field duplicates WDUP1 (MW102) and WDUP2 (MW6) encountered nickel concentrations above the ecological SAC of 11µg/L. The maximum concentration was detected in WDUP1 (MW102).
Zinc	9	75	-	5	Groundwater samples MW4, MW6, MW102 and field duplicates WDUP1 (MW102) and WDUP2 (MW6) encountered zinc concentrations above the ecological SAC of 8µg/L. The maximum concentration was detected in MW4.
Total PAHs	9	<0.2	-	-	-
Benzo(a)pyrene	9	<0.1	-	-	-
Naphthalene	9	<0.1	-	-	-
TRH F1	10	<10	-	NSL	-
TRH F2	10	<50	-	NSL	-
TRH F3	10	<100	NSL	NSL	-
TRH F4	10	<100	NSL	NSL	-
Benzene	10	<1	-	-	-
Toluene	10	11	-	-	Groundwater sample MW1 and its associated laboratory duplicate sample encountered toluene concentrations below the SAC.
Ethylbenzene	10	<1	-	-	-
m+p-Xylene	10	<2	-	-	-
o-Xylene	10	<1	-	-	-
Total Xylenes	10	<2	-	-	-
VOCs	10	<1	-	-	The toluene detections in MW1 and its associated laboratory duplicate is discussed above.
PFOS	8	0.001	NSL	1	Groundwater sample MW1 encountered a PFOS concentration of 0.001µg/L above the ecological SAC of 0.00023µg/L.
PFOS + PFHxS	8	0.002	-	NSL	-

Analyte	N	Max. (µg/L)	N> Human Health SAC	N> Ecological SAC	Comments
PFOA	8	0.001	-	-	-

Notes:

N: Total number of samples including primary, field duplicate and laboratory duplicate samples

NSL: No set limit

NL: Not limiting

7 DISCUSSION

7.1 Tier 1 Risk Assessment and Review of CSM

For a contaminant to represent a risk to a receptor, the following three conditions must be present:

1. Source – The presence of a contaminant;
2. Pathway – A mechanism or action by which a receptor can become exposed to the contaminant; and
3. Receptor – The human or ecological entity which may be adversely impacted following exposure to contamination.

If one of the above components is missing, the potential for adverse risks is relatively low.

7.1.1 Soil

All soil results were below the respective human health and ecological SAC. FCF/ACM was not identified within the fill soil at the test locations and asbestos was not identified within the soil samples analysed at the laboratory.

JKE note that a total PCB concentration of 1.2mg/kg (which was below the SAC of 7 mg/kg) was detected in fill sample obtained from TP521 (0-0.1m). A field duplicate/replicate sample SDUP503 (0-0.1m) obtained from the same fill profile was analysed for total PCBs. The result was less than the laboratory PQL, indicating that the primary result was an anomaly. An underlying natural soil sample TP521 (0.4-0.5m) was also analysed for total PCBs and the results were less than the PQL.

TP521 is located in the central section of the hospital site as shown on Figure 2a. No point sources of PCBs were identified during the DSI or the previous investigations undertaken at the hospital site. Since the detection is within the surficial fill profile, and as the nearest adjacent sampling points are 28m away, the potential extent of the PCBs is uncertain, and it is possible that the sample in TP521 has not detected the highest concentrations. On this basis and considering there is a potential for a complete SPR linkage to eventuate due to the surficial nature of the impact, further action is required.

JKE recommend additional targeted sampling and further analysis of PCBs in soils in the vicinity of TP521, followed by a site-specific Tier 2 Human Health Risk Assessment (HHRA) to address the NEPM (2013) framework. If risks are assessed to be unacceptable, then a Remediation Action Plan (RAP) must be prepared and implemented. We recommend that the specialist HHRA consultant be engaged and provide advice relating to the specific type of PCB analysis required to inform the risk assessment, prior to completing the additional sampling.

We recommend that an Unexpected Finds Protocol (UFP) be prepared, and this must include a specific contingency plan for the removal of any former asbestos containing irrigation pipelines that may still remain on the hospital site, and also protocols for addressing other unexpected finds.

7.1.2 Groundwater

7.1.2.1 Heavy Metals

The groundwater samples encountered elevated concentrations of copper, nickel and zinc above the ecological SAC. The elevations above the SAC are shown on Figure 3. We are of the opinion that the heavy metal exceedances are likely to be representative of background concentrations in an urban environment and point sources of site contamination were not identified. We have assessed the risk pose by these elevations to site receptors to be low.

7.1.2.2 PFOS

A groundwater sample MW1 encountered marginal elevations of PFOS concentrations above the ecological SAC, as shown on Figure 3. The source of the PFOS at this location is uncertain, however it is noted that low concentrations of PFAS concentrations were identified in most groundwater samples from the site which suggests PFAS background concentrations exist. The data do not indicate that impacts are associated with the substation AEC.

Traces of toluene were also found in MW1, which may indicate that a minor localise impact has occurred historically in that vicinity, potentially from the use of paints and paint thinners. Elevated PFOS (above the SAC) or detections of toluene were not identified in any of the other monitoring wells during the DSI, a majority of which were down-gradient of MW1 based on the anticipated groundwater flow direction.

We have assessed the risk posed by the substation to the hospital site to be low due to the following:

- The substation is relatively new, and a review of the site history did not indicate any fire related damage where PFAS containing firefighting form (FFF) could have been used;
- The NSW Rural Fire Service (RFS) indicates that from 2007[29], the RFS commenced the removal and disposal of PFAS based FFF;
- Widespread concentrations of PFAS were not detected in the soil and groundwater media analysed for the DSI at concentrations above the SAC; and
- The detection of PFOS in groundwater sample MW1 is not inconsistent with concentrations of PFOS detected in urban environments.

7.1.2.3 Potential Risk to Receptors

JKE note that the proposed hospital landuse does not include any beneficial use of groundwater and hence the risk of exposure to groundwater is low in the context of the proposed development. Notwithstanding, risks would need to be considered further in a construction scenario that involves dewatering. In such a scenario, treatment will be necessary before groundwater is discharged into stormwater. Council approval is required prior to any stormwater discharge. Reference should be made to the mitigation measures outlined in Section 8.1.

[29] https://www.rfs.nsw.gov.au/news-and-media/pfas-environmental-investigation

7.2 Decision Statements

The decision statements are addressed below:

Did the site inspection, or does the historical information identify potential contamination sources/AEC at the site?

Yes, as discussed in Section 3.

Are any results above the SAC?

Yes, as discussed in Sections 6.4 and 6.5.

Do potential risks associated with contamination exist, and if so, what are they?

Yes, JKE identified potential risks associated with the PCBs identified in the surficial fill at TP521.

Is remediation required?

A definitive trigger for remediation has not been identified. However, JKE recommend undertaking further targeted sampling/analysis for PCBs in the vicinity of TP521 followed by a site-specific HHRA to assess whether remediation of PCBs in soil is required.

Is the site characterisation sufficient to provide adequate confidence in the above decisions?

Yes.

Is the site suitable for the proposed development, or can the site be made suitable subject to further characterisation and/or remediation?

JKE are of the opinion that the site can be made suitable for the proposed hospital development by undertaking the additional investigation and HHRA and if required, preparing and implementing a RAP.

8 CONCLUSIONS AND RECOMMENDATIONS

The DSI included a review of site information including previous investigations completed at the site, historical information, soil sampling from 32 testpits locations and groundwater sampling from six monitoring wells. The site has been historically used for agricultural (grazing) purposes prior to the 1970s and as a golf course between 1970s to circa 1994.

The DSI identified the following AEC at the site: fill material and former land use as a golf course. The CSM identified the adjoining electrical substation as a potential off-site AEC.

The soil laboratory results did not identify any elevations of CoPC above the human health-based and ecological SAC. However, PCB impacted fill was encountered in TP521. JKE recommend additional targeted sampling and further analysis of PCBs in soils in the vicinity of TP521, followed by a site-specific Tier 2 Human HHRA to address the NEPM (2013) framework. If risks are assessed to be unacceptable, then a RAP must be prepared and implemented. We recommend that the specialist HHRA consultant be engaged and provide advice relating to the specific type of PCB analysis required to inform the risk assessment, prior to completing the additional sampling.

We recommend that a UFP be prepared and this must include a specific contingency plan for the removal of any former asbestos containing irrigation pipelines that may still remain on the hospital site, and also protocols for addressing other unexpected finds.

Elevations of selected heavy metals (copper, nickel and zinc) and PFOS were detected in the groundwater above the ecological SAC. We have assessed the risk pose by these elevations to be low in the context of the proposed land use provided that if groundwater is encountered during construction, it is appropriately managed.

Based on the results of the DSI, JKE is of the opinion that the site can be made suitable for the landuse as outlined in Section 1.1 by implementing the recommendations made within this report, the UFP, and the RAP should it be required.

At this stage, JKE consider the need to report site contamination to the NSW EPA under the Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997 (2015)[30] should be assessed on completion of the HHRA.

JKE consider that the report objectives outlined in Section 1.2 have been addressed.

[30] NSW EPA, (2015). *Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997* (referred to as Duty to Report Contamination)

8.1 Mitigation Measures

Mitigation measures identified are outlined in the table below:

Table 8-1: Mitigation Measures

Mitigation Number / Name	Aspect / Section	Mitigation Measure	Reason for Mitigation Measure
Additional targeted soil investigation and Site-Specific Tier 2 HHRA	Pre-construction.	Completion of additional targeted soil sampling in the vicinity of TP521 and preparation of a HHRA to assess the need for remediation.	The occurrence of PCBs in one sample from TP521 was inconsistent with the remaining data and it is possible that the sample in TP521 has not detected the highest PCB concentrations in soil in this area. Further targeted investigation is required and a site specific HHRA should be prepared prior to the commencement of development to assess the need for remediation. In the event the HHRA identifies a risk to human receptors, then the PCB impacted fill should be remediated under the provisions of a RAP.
Unexpected Finds Protocol (UFP)	Pre-construction and during construction	Preparation and implementation of a UFP	An UFP should be prepared and implemented prior to the commence of development. The measures outlined in the UFP must be addressed during development works.

9 LIMITATIONS

The report limitations are outlined below:

- JKE accepts no responsibility for any unidentified contamination issues at the site. Any unexpected problems/subsurface features that may be encountered during development works should be inspected by an environmental consultant as soon as possible;
- Previous use of this site may have involved excavation for the foundations of buildings, services, and similar facilities. In addition, unrecorded excavation and burial of material may have occurred on the site. Backfilling of excavations could have been undertaken with potentially contaminated material that may be discovered in discrete, isolated locations across the site during construction work;
- This report has been prepared based on site conditions which existed at the time of the investigation; scope of work and limitation outlined in the JKE proposal; and terms of contract between JKE and the client (as applicable);
- The conclusions presented in this report are based on investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances, visual observations of the site and immediate surrounds and documents reviewed as described in the report;
- Subsurface soil and rock conditions encountered between investigation locations may be found to be different from those expected. Groundwater conditions may also vary, especially after climatic changes;
- The investigation and preparation of this report have been undertaken in accordance with accepted practice for environmental consultants, with reference to applicable environmental regulatory authority and industry standards, guidelines and the assessment criteria outlined in the report;
- Where information has been provided by third parties, JKE has not undertaken any verification process, except where specifically stated in the report;
- JKE has not undertaken any assessment of off-site areas that may be potential contamination sources or may have been impacted by site contamination, except where specifically stated in the report;
- JKE accept no responsibility for potentially asbestos containing materials that may exist at the site. These materials may be associated with demolition of pre-1990 constructed buildings or fill material at the site;
- JKE have not and will not make any determination regarding finances associated with the site;
- Additional investigation work may be required in the event of changes to the proposed development or landuse. JKE should be contacted immediately in such circumstances;
- Material considered to be suitable from a geotechnical point of view may be unsatisfactory from a soil contamination viewpoint, and vice versa; and
- This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose.

Important Information About This Report

These notes have been prepared by JKE to assist with the assessment and interpretation of this report.

The Report is based on a Unique Set of Project Specific Factors
This report has been prepared in response to specific project requirements as stated in the JKE proposal document which may have been limited by instructions from the client. This report should be reviewed, and if necessary, revised if any of the following occur:

- The proposed land use is altered;
- The defined subject site is increased or sub-divided;
- The proposed development details including size, configuration, location, orientation of the structures or landscaped areas are modified;
- The proposed development levels are altered, eg addition of basement levels; or
- Ownership of the site changes.

JKE will not accept any responsibility whatsoever for situations where one or more of the above factors have changed since completion of the investigation. If the subject site is sold, ownership of the investigation report should be transferred by JKE to the new site owners who will be informed of the conditions and limitations under which the investigation was undertaken. No person should apply an investigation for any purpose other than that originally intended without first conferring with the consultant.

Changes in Subsurface Conditions
Subsurface conditions are influenced by natural geological and hydrogeological process and human activities. Groundwater conditions are likely to vary over time with changes in climatic conditions and human activities within the catchment (e.g. water extraction for irrigation or industrial uses, subsurface waste water disposal, construction related dewatering). Soil and groundwater contaminant concentrations may also vary over time through contaminant migration, natural attenuation of organic contaminants, ongoing contaminating activities and placement or removal of fill material. The conclusions of an investigation report may have been affected by the above factors if a significant period of time has elapsed prior to commencement of the proposed development.

This Report is based on Professional Interpretations of Factual Data
Site investigations identify actual subsurface conditions at the actual sampling locations at the time of the investigation. Data obtained from the sampling and subsequent laboratory analyses, available site history information and published regional information is interpreted by geologists, engineers or environmental scientists and opinions are drawn about the overall subsurface conditions, the nature and extent of contamination, the likely impact on the proposed development and appropriate remediation measures.

Actual conditions may differ from those inferred, because no professional, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than an investigation indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to prevent the unanticipated, but steps can be taken to help minimise the impact. For this reason, site owners should retain the services of their consultants throughout the development stage of the project, to identify variances, conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

Investigation Limitations
Although information provided by a site investigation can reduce exposure to the risk of the presence of contamination, no environmental site investigation can eliminate the risk. Even a rigorous professional investigation may not detect all contamination on a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled. Contaminant analysis cannot possibly cover every type of contaminant which may occur; only the most likely contaminants are screened.

Misinterpretation of Site Investigations by Design Professionals

Costly problems can occur when other design professionals develop plans based on misinterpretation of an investigation report. To minimise problems associated with misinterpretations, the environmental consultant should be retained to work with appropriate professionals to explain relevant findings and to review the adequacy of plans and specifications relevant to contamination issues.

Logs Should not be Separated from the Investigation Report

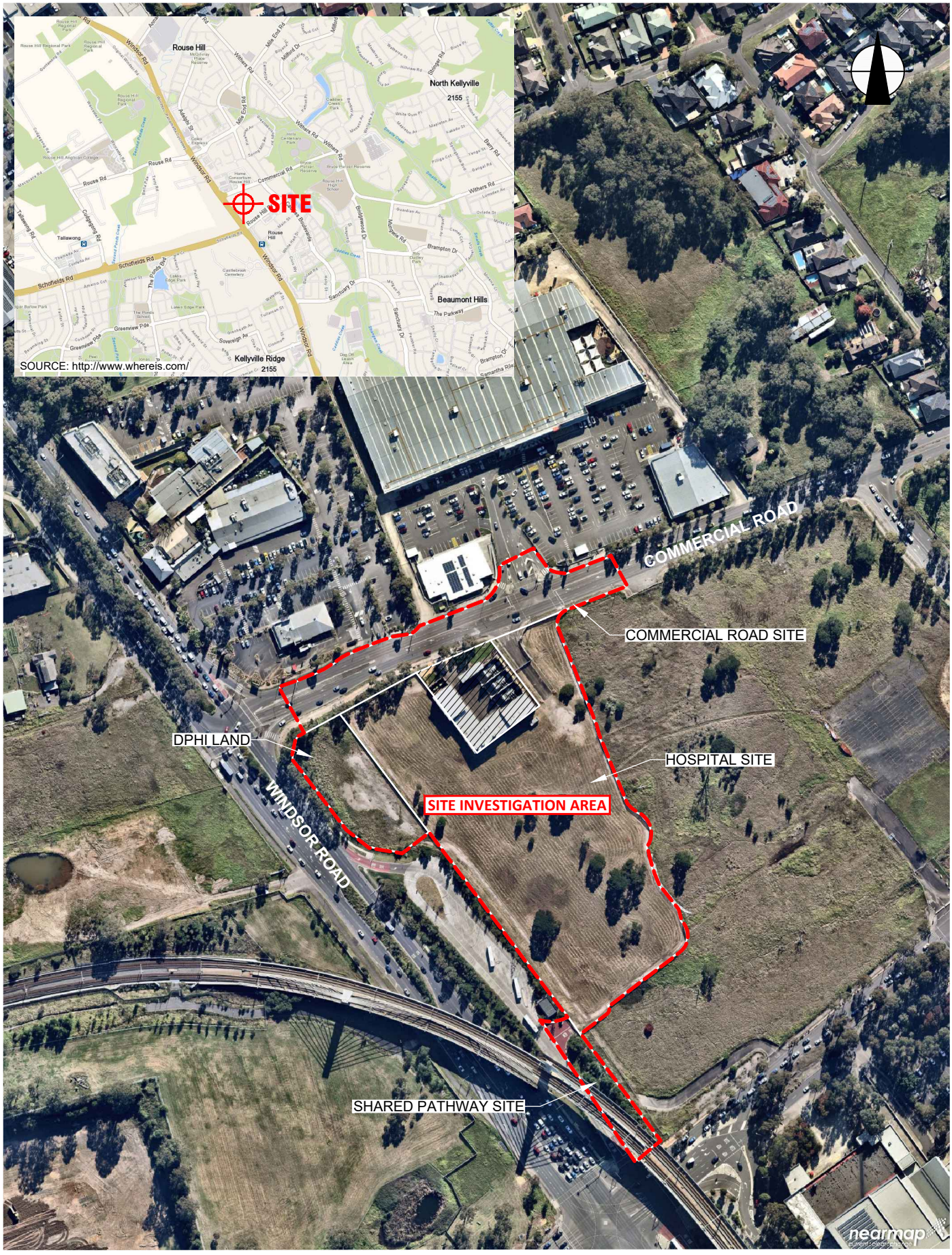
Borehole and test pit logs are prepared by environmental scientists, engineers or geologists based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these should not be re-drawn for inclusion in site remediation or other design drawings, as subtle but significant drafting errors or omissions may occur in the transfer process. Photographic reproduction can eliminate this problem, however contractors can still misinterpret the logs during bid preparation if separated from the text of the investigation. If this occurs, delays, disputes and unanticipated costs may result. In all cases it is necessary to refer to the rest of the report to obtain a proper understanding of the investigation. Please note that logs with the 'Environmental Log' header are not suitable for geotechnical purposes as they have not been peer reviewed by a Senior Geotechnical Engineer.

To reduce the likelihood of borehole and test pit log misinterpretation, the complete investigation should be available to persons or organisations involved in the project, such as contractors, for their use. Denial of such access and disclaiming responsibility for the accuracy of subsurface information does not insulate an owner from the attendant liability. It is critical that the site owner provides all available site information to persons and organisations such as contractors.

Read Responsibility Clauses Closely

Because an environmental site investigation is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in written transmittals. These are definitive clauses designed to indicate consultant responsibility. Their use helps all parties involved recognise individual responsibilities and formulate appropriate action. Some of these definitive clauses are likely to appear in the environmental site investigation, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to any questions.

Appendix A: Report Figures



AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

This plan should be read in conjunction with the Environmental report.

Title: **SITE INVESTIGATION AREA**

Location: CNR WINDSOR AND COMMERCIAL ROAD, ROUSE HILL, NSW

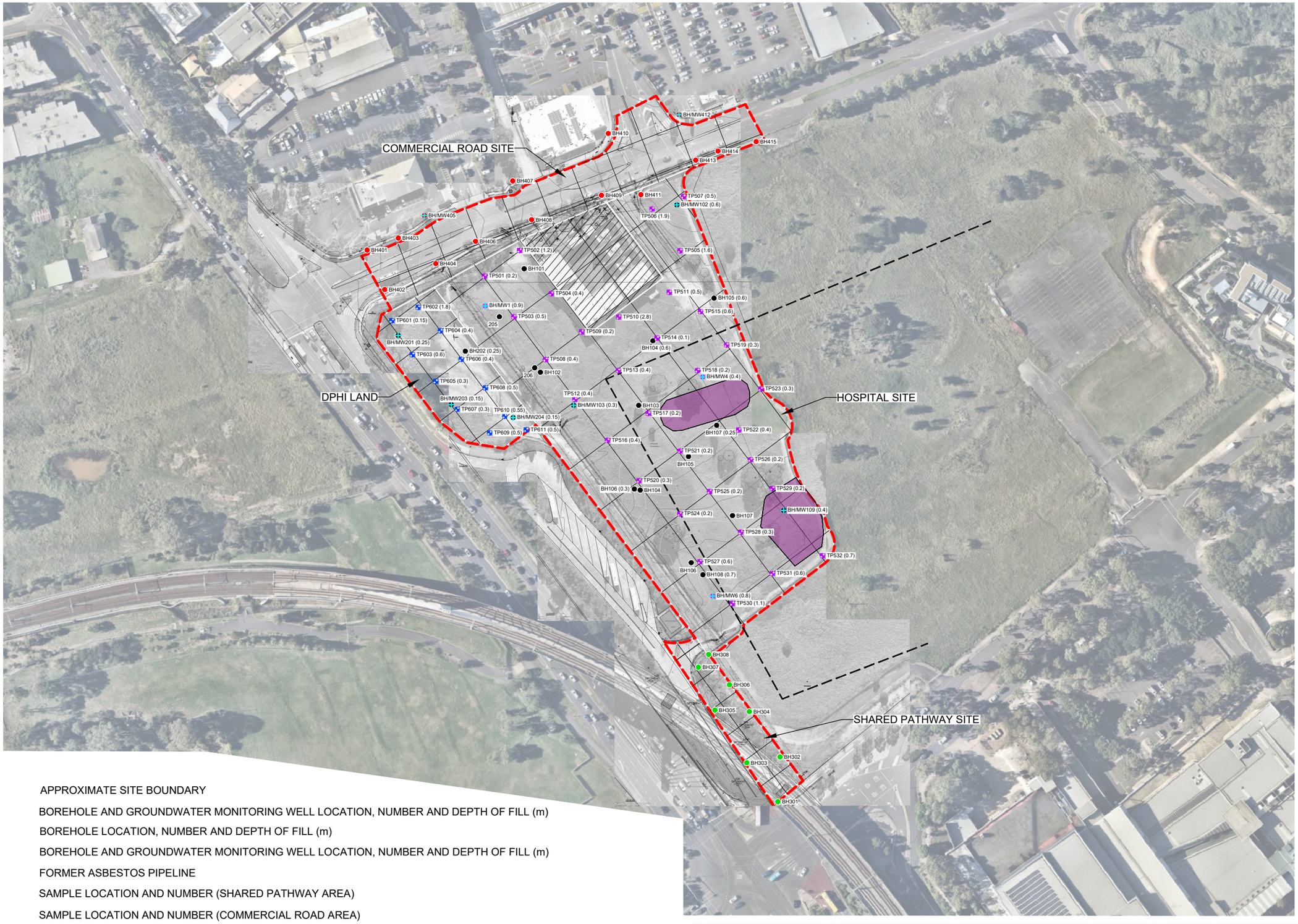
Project No: E37757B

Figure No: 1

JKEnvironments

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LEGEND

— — —	APPROXIMATE SITE BOUNDARY
BH/MW1	BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
BH101	BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m)
BH/MW102	BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
— — —	FORMER ASBESTOS PIPELINE
BH301	SAMPLE LOCATION AND NUMBER (SHARED PATHWAY AREA)
BH401	SAMPLE LOCATION AND NUMBER (COMMERCIAL ROAD AREA)
BH/MW405	BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION AND NUMBER (COMMERCIAL ROAD AREA)
TP501	SAMPLE LOCATION, NUMBER AND DEPTH OF FILL (m) (HOSPITAL SITE AREA)
TP601	SAMPLE LOCATION, NUMBER AND DEPTH OF FILL (m) (DPHI LAND AREA)
	ABORIGINAL INVESTIGATION AREA
	SUBSTATION (NOT INCLUDED IN INVESTIGATION AREA)

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 20 40 60 80 100

SCALE 1:2000 @A3 METRES

This plan should be read in conjunction with the Environmental report.

Title: **SAMPLE LOCATION PLAN**

Location: CNR WINDSOR AND COMMERCIAL ROAD, ROUSE HILL, NSW

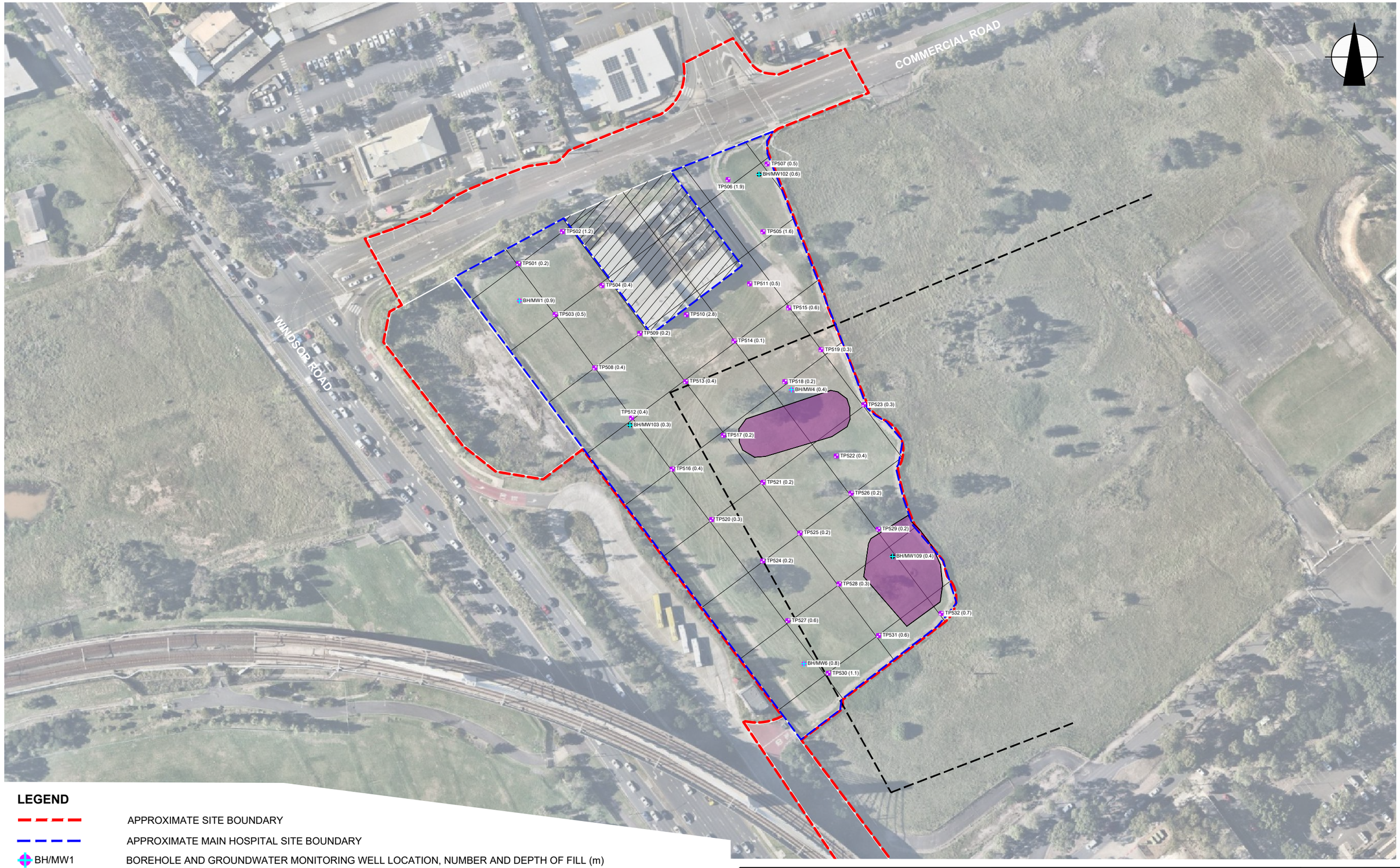
Project No: E37757B

Figure No: 2

JKEnvironments

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LEGEND

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE MAIN HOSPITAL SITE BOUNDARY
- BH/MW1 — BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- BH/MW102 — BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- FORMER ASBESTOS PIPELINE
- TP501 — SAMPLE LOCATION, NUMBER AND DEPTH OF FILL (m) (HOSPITAL SITE AREA)
- ABORIGINAL INVESTIGATION AREA
- SUBSTATION (NOT INCLUDED IN INVESTIGATION AREA)

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 15 30 45 60 75

SCALE 1:1500 @A3 METRES

This plan should be read in conjunction with the Environmental report.

Title: **SAMPLE LOCATION PLAN MAIN HOSPITAL SITE**

Location: CNR WINDSOR AND COMMERCIAL ROAD, ROUSE HILL, NSW

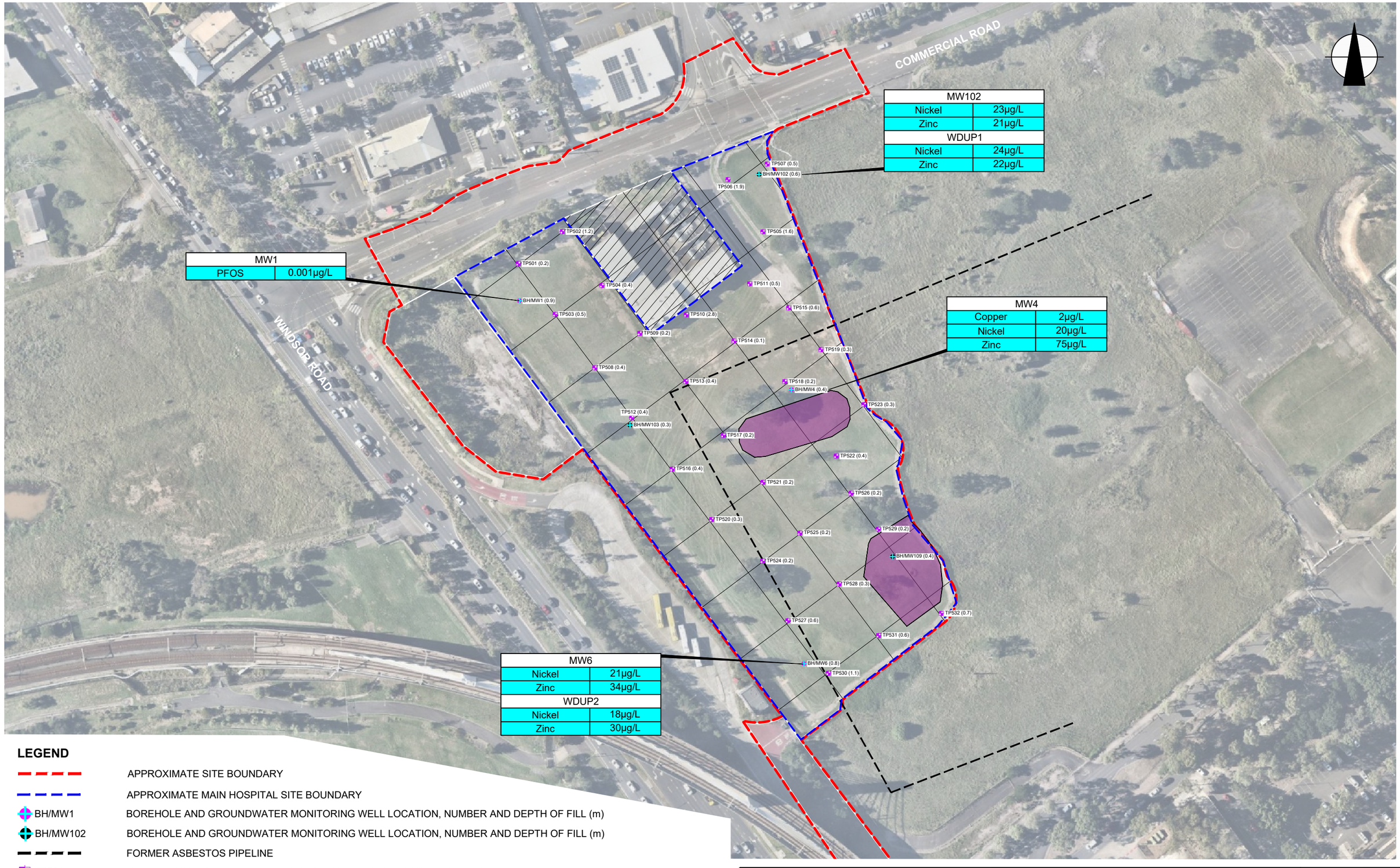
Project No: E37757B

Figure No: 2a

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LEGEND

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE MAIN HOSPITAL SITE BOUNDARY
- BH/MW1 — BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- BH/MW102 — BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- FORMER ASBESTOS PIPELINE
- TP501 — SAMPLE LOCATION, NUMBER AND DEPTH OF FILL (m) (HOSPITAL SITE AREA)
- ABORIGINAL INVESTIGATION AREA
- SUBSTATION (NOT INCLUDED IN INVESTIGATION AREA)

SAMPLE ID	-
CHEMICAL	CONCENTRATION (µg/L)

GROUNDWATER SAMPLE EXCEEDANCE

- GROUNDWATER CONTAMINATION ABOVE SAC

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 15 30 45 60 75

SCALE 1:1500 @A3 METRES

This plan should be read in conjunction with the Environmental report.

Title: **SAC EXCEEDANCE PLAN MAIN HOSPITAL SITE**

Location: CNR WINDSOR AND COMMERCIAL ROAD, ROUSE HILL, NSW

Project No: E37757B

Figure No: 3a

JKEnvironments

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Appendix B: Site Information

Selected Site Photos Obtained During the Investigation

Project Ref: E37757B
Site Address: Main Hospital Site, Corner of Windsor and Commercial Roads, Rouse Hill, NSW
Selected Site Photos Dated: 24 July 2025

	**Photograph 1:** Taken along the western boundary showing the central and northern portion of the site. Note the gravel path along the western boundary.
	**Photograph 2:** Taken in the south-western portion of the site depicting one of the suspected former archaeological test pits.
	**Photograph 3:** Taken along the western portion of the site, depicting one of the monitoring wells installed during previous JKG investigations.



Photograph 4: Overview of the central portion of the site from the western boundary.

Lotsearch Environmental Risk and Planning Report

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 15 Jul 2025 09:44:11

Reference: LS087894 EP

Address: Commercial & Windsor Roads, Rouse Hill, NSW 2155

Disclaimer:
The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features.
You should obtain independent advice before you make any decision based on the information within the report.
The detailed terms applicable to use of this report are set out at the end of this report.

Dataset Listing

Datasets contained within this report, detailing their source and data currency:

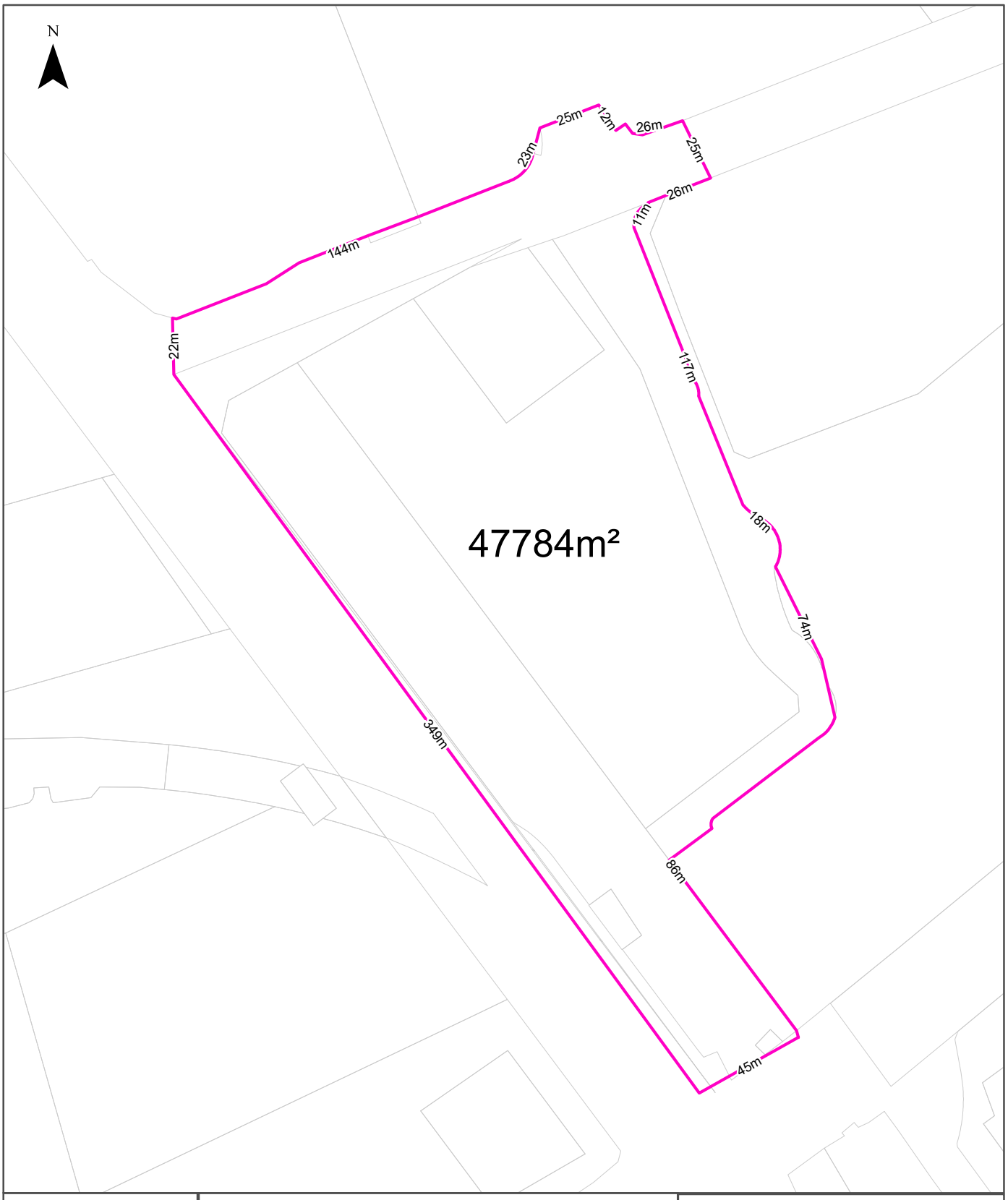
Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Customer Service - Spatial Services	24/06/2025	24/06/2025	Monthly	-	-	-	-
Topographic Data	NSW Department of Customer Service - Spatial Services	20/05/2025	20/05/2025	Annually	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority NSW	10/06/2025	08/05/2025	Monthly	1000m	0	0	0
Contaminated Land Records of Notice	Environment Protection Authority NSW	11/06/2025	11/06/2025	Monthly	1000m	0	0	0
Former Gasworks	Environment Protection Authority NSW	20/05/2025	15/05/2025	Quarterly	1000m	0	0	0
Notices under the POEO Act 1997	Environment Protection Authority NSW	30/06/2025	30/06/2025	Monthly	1000m	0	2	2
National Waste Management Facilities Database	Geoscience Australia	30/05/2025	19/01/2023	Annually	1000m	0	2	2
National Liquid Fuel Facilities	Geoscience Australia	16/10/2024	19/01/2023	Annually	1000m	0	0	2
EPA PFAS Investigation Program	Environment Protection Authority NSW	30/06/2025	05/02/2025	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Australian Department of Defence	11/06/2025	11/06/2025	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Australian Department of Defence	11/06/2025	11/06/2025	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	11/06/2025	21/05/2025	Monthly	2000m	0	0	0
Defence Controlled Areas	Australian Department of Defence	10/04/2025	10/04/2025	Quarterly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Australian Department of Defence	11/06/2025	02/09/2022	Quarterly	2000m	0	0	0
National Unexploded Ordnance (UXO)	Australian Department of Defence	10/04/2025	10/04/2025	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority NSW	28/11/2024	15/12/2022	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority NSW	16/06/2025	16/06/2025	Monthly	1000m	1	1	1
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority NSW	16/06/2025	16/06/2025	Monthly	1000m	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority NSW	16/06/2025	16/06/2025	Monthly	1000m	4	5	16
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	0	0	0
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	32	32
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	0	0
Points of Interest	NSW Department of Customer Service - Spatial Services	19/05/2025	19/05/2025	Quarterly	1000m	1	2	44
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	19/05/2025	19/05/2025	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	19/05/2025	19/05/2025	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Customer Service - Spatial Services	20/05/2025	20/05/2025	Quarterly	1000m	0	2	9
State Forest	Forestry Corporation of NSW	18/12/2024	11/11/2024	Annually	1000m	0	0	0
Hydrogeology Map of Australia	Geoscience Australia	22/04/2025	19/08/2019	Annually	1000m	1	1	1

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2024	NSW Department of Climate Change, Energy, the Environment and Water	13/05/2025	28/06/2024	Quarterly	1000m	0	0	0
National Groundwater Information System (NGIS) Boreholes	Bureau of Meteorology; Water NSW	30/05/2025	04/03/2025	Annually	2000m	0	0	8
NSW Seamless Geology Single Layer: Rock Units	NSW Department of Primary Industries and Regional Development	19/05/2025	16/04/2024	Annually	1000m	1	1	5
NSW Seamless Geology Single Layer: Geological Boundaries and Faults	NSW Department of Primary Industries and Regional Development	19/05/2025	16/04/2024	Annually	1000m	0	0	0
NSW Seamless Geology Single Layer: Trendlines	NSW Department of Primary Industries and Regional Development	19/05/2025	16/04/2024	Annually	1000m	0	0	0
NSW Seamless Geology Single Layer: Fold Axes	NSW Department of Primary Industries and Regional Development	19/05/2025	16/04/2024	Annually	1000m	0	0	0
Naturally Occurring Asbestos Potential	NSW Department of Primary Industries and Regional Development	05/05/2025	30/09/2015	Annually	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	15/01/2025	17/02/2011	Annually	1000m	1	1	1
Soil Landscapes of Central and Eastern NSW	NSW Department of Climate Change, Energy, the Environment and Water	18/12/2024	27/07/2020	Annually	1000m	1	1	2
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Housing and Infrastructure	26/06/2025	09/05/2025	Monthly	500m	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	15/01/2025	21/02/2013	Annually	1000m	1	1	1
Dryland Salinity - National Assessment	Australian Bureau of Agricultural and Resource Economics and Sciences	03/06/2025	15/04/2025	Annually	1000m	0	1	1
Dryland Salinity Potential of Western Sydney	NSW Department of Climate Change, Energy, the Environment and Water	29/04/2025	26/02/2024	Annually	1000m	1	1	5
Mining Subsidence Districts	NSW Department of Customer Service	20/05/2025	20/05/2025	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Primary Industries and Regional Development	09/07/2025	09/07/2025	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Primary Industries and Regional Development	09/07/2025	09/07/2025	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Primary Industries and Regional Development	09/07/2025	09/07/2025	Monthly	1000m	12	12	12
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Housing and Infrastructure	26/06/2025	08/09/2023	Monthly	1000m	2	2	2
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Housing and Infrastructure	26/06/2025	13/06/2025	Monthly	1000m	4	11	64
Commonwealth Heritage List	Australian Department of Climate Change, Energy, the Environment and Water	23/10/2024	13/04/2022	Annually	1000m	0	0	0
National Heritage List	Australian Department of Climate Change, Energy, the Environment and Water	23/10/2024	13/04/2022	Annually	1000m	0	0	1
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	20/05/2025	21/03/2025	Quarterly	1000m	0	1	2
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Housing and Infrastructure	26/06/2025	13/06/2025	Monthly	1000m	2	2	14
Bush Fire Prone Land	NSW Rural Fire Service	24/06/2025	23/06/2025	Monthly	1000m	0	0	3
NSW Native Vegetation Type Map	NSW Department of Climate Change, Energy, the Environment and Water	28/05/2025	04/10/2024	Quarterly	1000m	2	2	52
Ramsar Wetlands of Australia	Australian Department of Climate Change, Energy, the Environment and Water	19/05/2025	05/03/2025	Annually	1000m	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Collaborative Australian Protected Areas Database (CAPAD) 2022 - Terrestrial	Australian Department of Climate Change, Energy, The Environment and Water	20/03/2025	19/06/2024	Annually	1000m	0	0	1
Collaborative Australian Protected Areas Database (CAPAD) 2022 - Marine	Australian Department of Climate Change, Energy, The Environment and Water	20/03/2025	30/06/2022	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	30/05/2025	07/05/2020	Annually	1000m	0	0	3
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	30/05/2025	07/05/2020	Annually	1000m	0	0	5
NSW BioNet Species Sightings	NSW Department of Climate Change, Energy, the Environment and Water	10/07/2025	10/07/2025	Monthly	10000m	-	-	-

Site Diagram

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 47784m²

Total Perimeter: 1.1km

Disclaimers:

Measurements are approximate only and may have been simplified or smaller lengths removed for readability.

Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Scale: 0 25 50 100 Meters

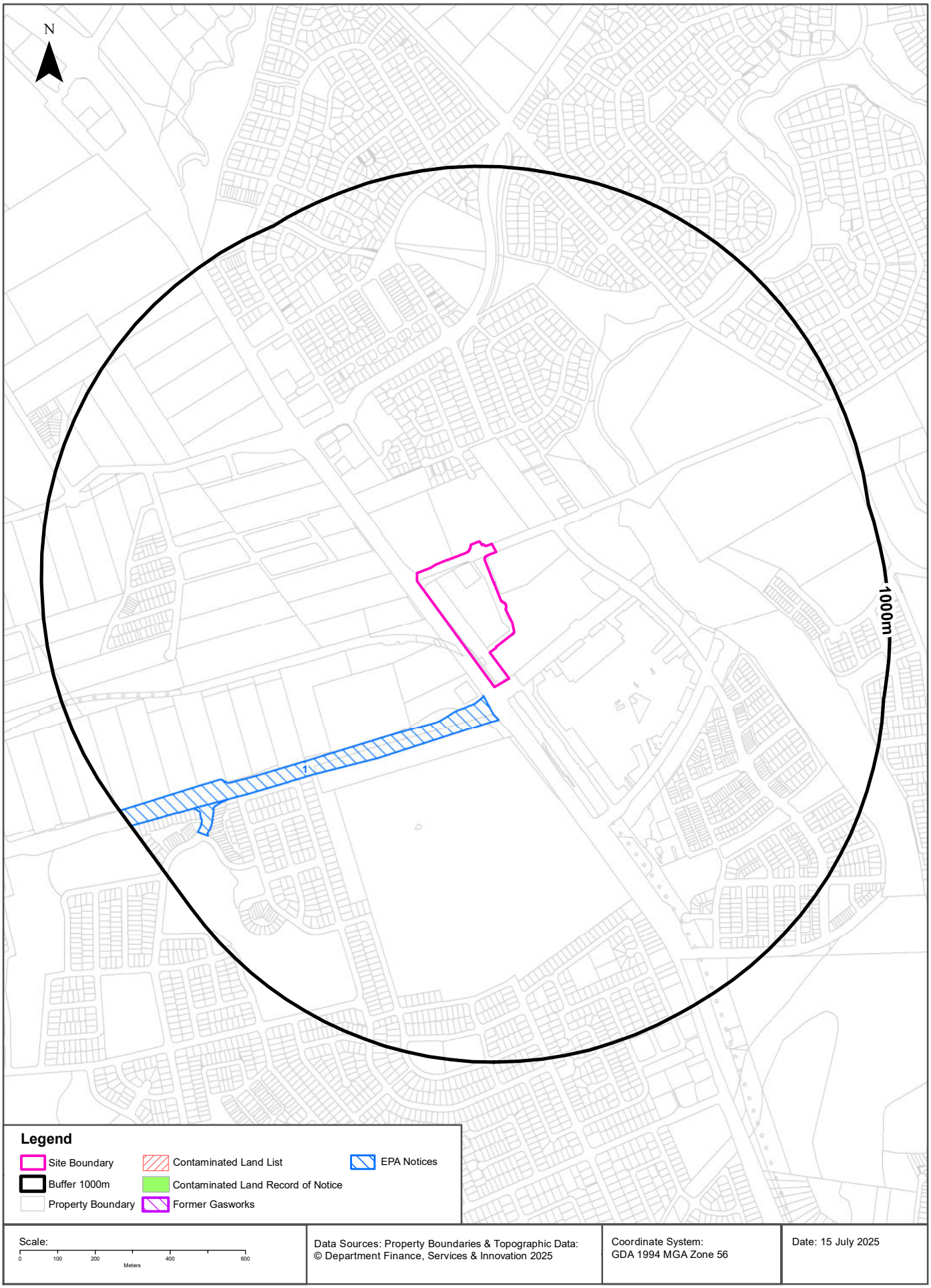
Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2025

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 July 2025

Contaminated Land

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Contaminated Land

Commercial & Windsor Roads, Rouse Hill, NSW 2155

List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
N/A	No records in buffer								

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
N/A	No records in buffer							

Contaminated Land Records of Notice Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority
Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit
http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm

Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
N/A	No records in buffer					

Former Gasworks Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

EPA Notices

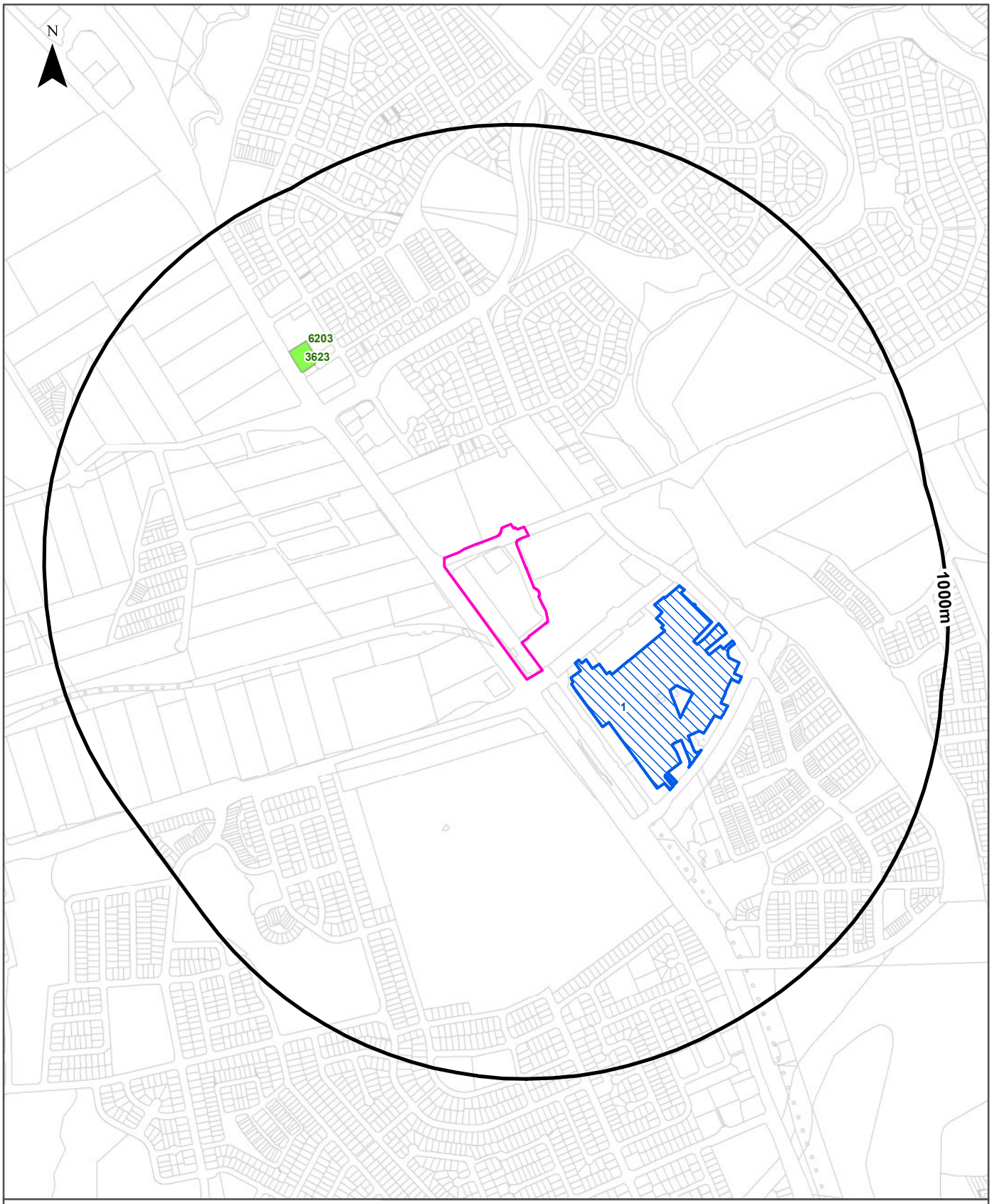
Penalty Notices, s.91 & s.92 Clean up Notices and s.96 Prevention Notices within the dataset buffer:

Map ID	Number	Type	Name	Address	Status	Issued Date	Act	Offence	Offence Date	Loc Conf	Dist	Dir
1	3085773617	Penalty Notice	OHL Abergeldie Schofields Road Upgrade joint Venture	Schofields Road East, ROUSE HILL, NSW 2155	Issued	03/04/2014	Protection of the Environment Operations Act 1997 - 120(1)	Pollute waters - Corporation	14/03/2014	Premise Match	38m	South West
	1531084	s.91 Clean Up Notice	OBRASCON HUARTE LAIN S.A	Schofields Road East, ROUSE HILL, NSW 2155	Issued	01/06/2015				Premise Match	38m	South West

NSW EPA Notice Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Waste Management & Liquid Fuel Facilities

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary
- Waste Management Facilities
- National Liquid Fuel Facilities

Scale:	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2025	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 July 2025

0 100 200 400 600 Meters

Waste Management & Liquid Fuel Facilities

Commercial & Windsor Roads, Rouse Hill, NSW 2155

National Waste Management Facilities Database

Sites on the National Waste Management Facilities Database within the dataset buffer:

Map ID	Owner	Name	Address	Management Type	Facility Type	Status	Loc Conf	Dist	Dir
1	WOOLWORTHS	WOOLWORTHS SUPERMARKET	33 MAIN STREET, ROUSE HILL	DROP-OFF	SOFT PLASTICS DROP-OFF FACILITY	OPERATIONAL	Premise Match	74m	South East
	COLES	COLES SUPERMARKET	82 MAIN STREET, ROUSE HILL	DROP-OFF	SOFT PLASTICS DROP-OFF FACILITY	OPERATIONAL	Premise Match	74m	South East

Source: Waste Management Facilities Database
Creative Commons 4.0 © Commonwealth of Australia (Geoscience Australia) 2022

National Liquid Fuel Facilities

National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
3623	Shell	Coles Express Rouse Hill	43 Panmure Street	Rouse Hill	Petrol Station	Operational		25/07/2011	Premise Match	583m	North West
6203	COLES EXPRESS	COLES EXPRESS ROUSE HILL	43 PANMURE ROAD	ROUSE HILL	PETROL STATION	OPERATIONAL			Premise Match	583m	North West

National Liquid Fuel Facilities Data Source: Geoscience Australia
Creative Commons 4.0 © Commonwealth of Australia

PFAS Investigation & Management Programs

Commercial & Windsor Roads, Rouse Hill, NSW 2155

EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Map ID	Site	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

EPA PFAS Investigation Program: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Defence PFAS Investigation Program

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Investigation Program Data Custodian: Department of Defence, Australian Government

Defence PFAS Management Program

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Management Program Data Custodian: Department of Defence, Australian Government

Airservices Australia National PFAS Management Program

Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

Map ID	Site Name	Impacts	Loc Conf	Dist	Dir
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites and Unexploded Ordnance

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Defence Controlled Areas (DCA)

Defence Controlled Areas provided by the Department of Defence within the dataset buffer:

Site ID	Location Name	Loc Conf	Dist	Dir
N/A	No records in buffer			

Defence Controlled Areas, Data Custodian: Department of Defence, Australian Government

Defence 3 Year Regional Contamination Investigation Program (RCIP)

Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

Property ID	Base Name	Address	Known Contamination	Loc Conf	Dist	Dir
N/A	No records in buffer					

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

National Unexploded Ordnance (UXO)

Sites which have been assessed by the Department of Defence for the potential presence of unexploded ordnance within the dataset buffer:

Site ID	Location Name	Category	Area Description	Additional Information	Commonwealth	Loc Conf	Dist	Dir
N/A	No records in buffer							

National Unexploded Ordnance (UXO), Data Custodian: Department of Defence, Australian Government

EPA Other Sites with Contamination Issues

Commercial & Windsor Roads, Rouse Hill, NSW 2155

EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill
- Pasminco Lead Abatement Strategy Area

Sites within the dataset buffer:

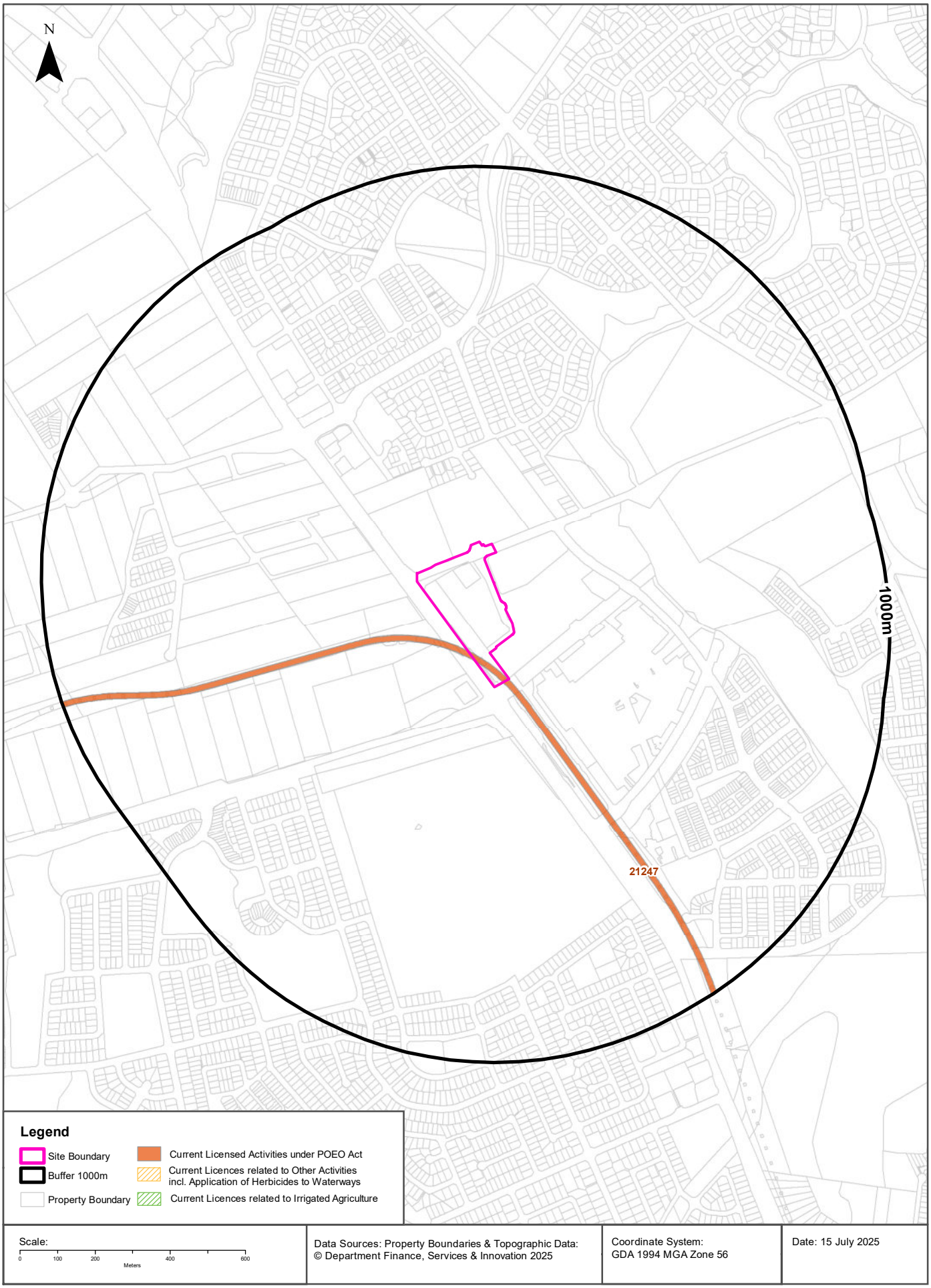
Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

EPA Other Sites with Contamination Issues: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Current EPA Licensed Activities

Commercial & Windsor Roads, Rouse Hill, NSW 2155



EPA Activities

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Licensed Activities under the POEO Act 1997

Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

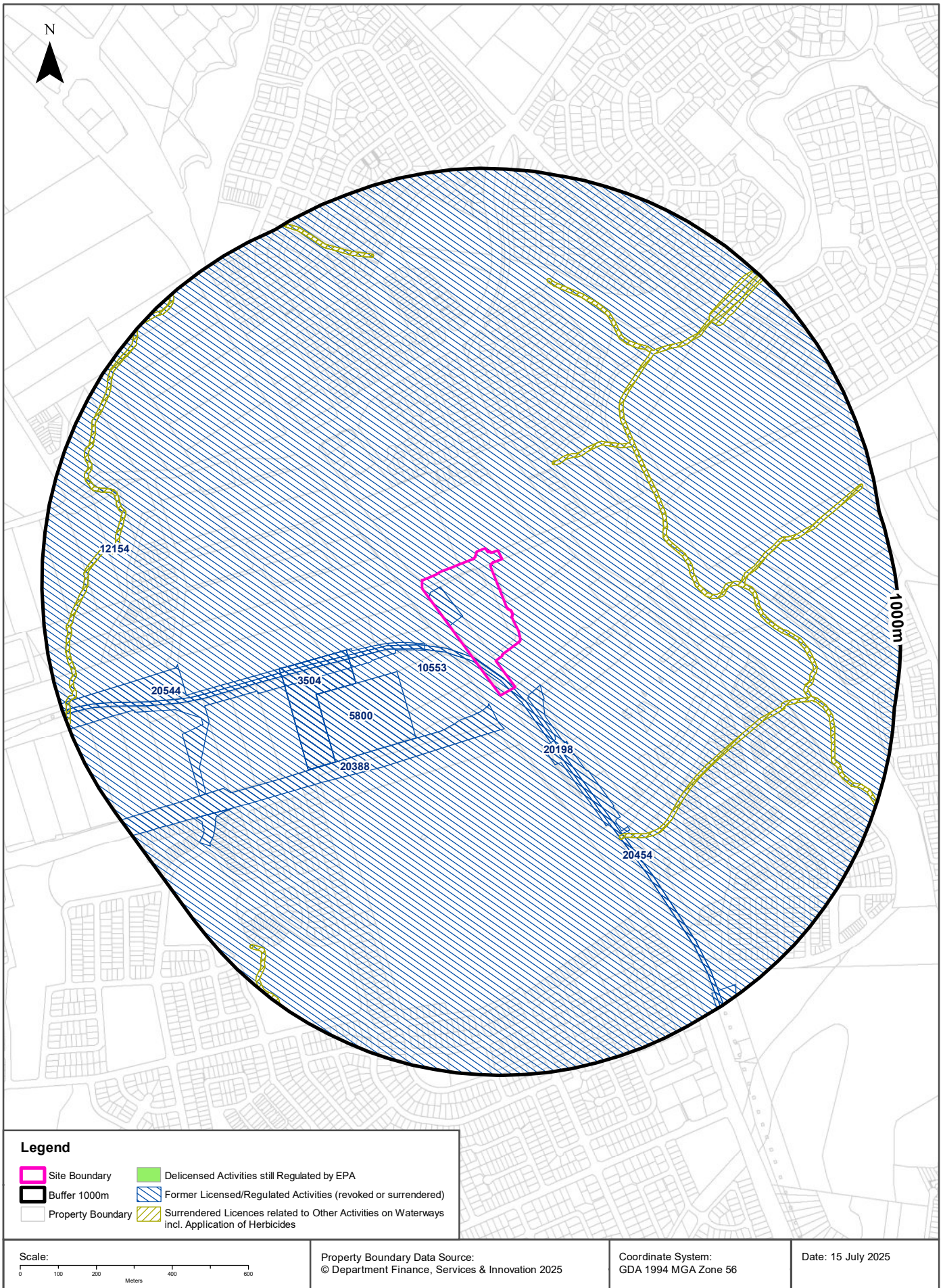
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
21247	Metro Trains Sydney Pty Ltd		SYDNEY METRO, ROUSE HILL, NSW 2155		Railway systems activities	Network of Features	0m	On-site

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

Commercial & Windsor Roads, Rouse Hill, NSW 2155



EPA Activities

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

Delicensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
10553	ACCIONA INFRASTRUCTURE PROJECTS AUSTRALIA PTY LTD	ROUSE HILL DEVELOPMENT AREA, STAGE 2, KELLYVILLE, NSW 2155	Surrendered	27/11/2000	Miscellaneous licensed discharge to waters (at any time)	Area Match	0m	On-site
20198	ACCIONA INFRASTRUCTURE PROJECTS AUSTRALIA PTY LTD	North West Rail Link Early Works Project, Between Tallawong Road Maintenance Facility and Epping Station, EPPING	Surrendered	08/03/2013	Railway systems activities	Network of Features	0m	On-site
20454	Salini Australia Pty Ltd	North West Rail Link - Surface and Viaduct Project, North West Rail Corridor from Balmoral Road Bella Vista to Cudgegong Road Rouse Hill, BELLA VISTA	Surrendered	03/06/2014	Railway systems activities	Network of Features	0m	On-site
20544	JOHN HOLLAND PTY LTD	North West Rail Link - Operations Trains and Stations Project, Between First Ponds Creek, Schofields and Cudgegong Road, ROUSE HILL, NSW 2155, ROUSE HILL	Surrendered	19/12/2014	Railway systems activities	Network of Features	0m	On-site
20388	OBRASCON HUARTE LAIN S.A	, Schofields Road East, ROUSE HILL, NSW 2155,	Surrendered	08/07/2014	Land-based extractive activity; Road construction	Premise Match	38m	South West
5800	BLACKTOWN CITY COUNCIL	ROUSE HILL SHALE PIT, SCHOFIELDS ROAD, ROUSE HILL	Surrendered	19/10/2000	Land-based extractive activity	Premise Match	183m	South West
3504	KNIGHTS SYNDICATE PTY LTD	KNIGHT'S SYNDICATE PTY LTD, 105 SCHOFIELDS ROAD, ROUSE HILL	Surrendered	08/01/2001	Recovery of general waste	Premise Match	257m	South West
3504	KNIGHTS SYNDICATE PTY LTD	KNIGHT'S SYNDICATE PTY LTD, 105 SCHOFIELDS ROAD, ROUSE HILL	Surrendered	08/01/2001	Waste storage - other types of waste	Premise Match	257m	South West
3504	KNIGHTS SYNDICATE PTY LTD	KNIGHT'S SYNDICATE PTY LTD, 105 SCHOFIELDS ROAD, ROUSE HILL	Surrendered	08/01/2001	Land-based extractive activity	Premise Match	257m	South West

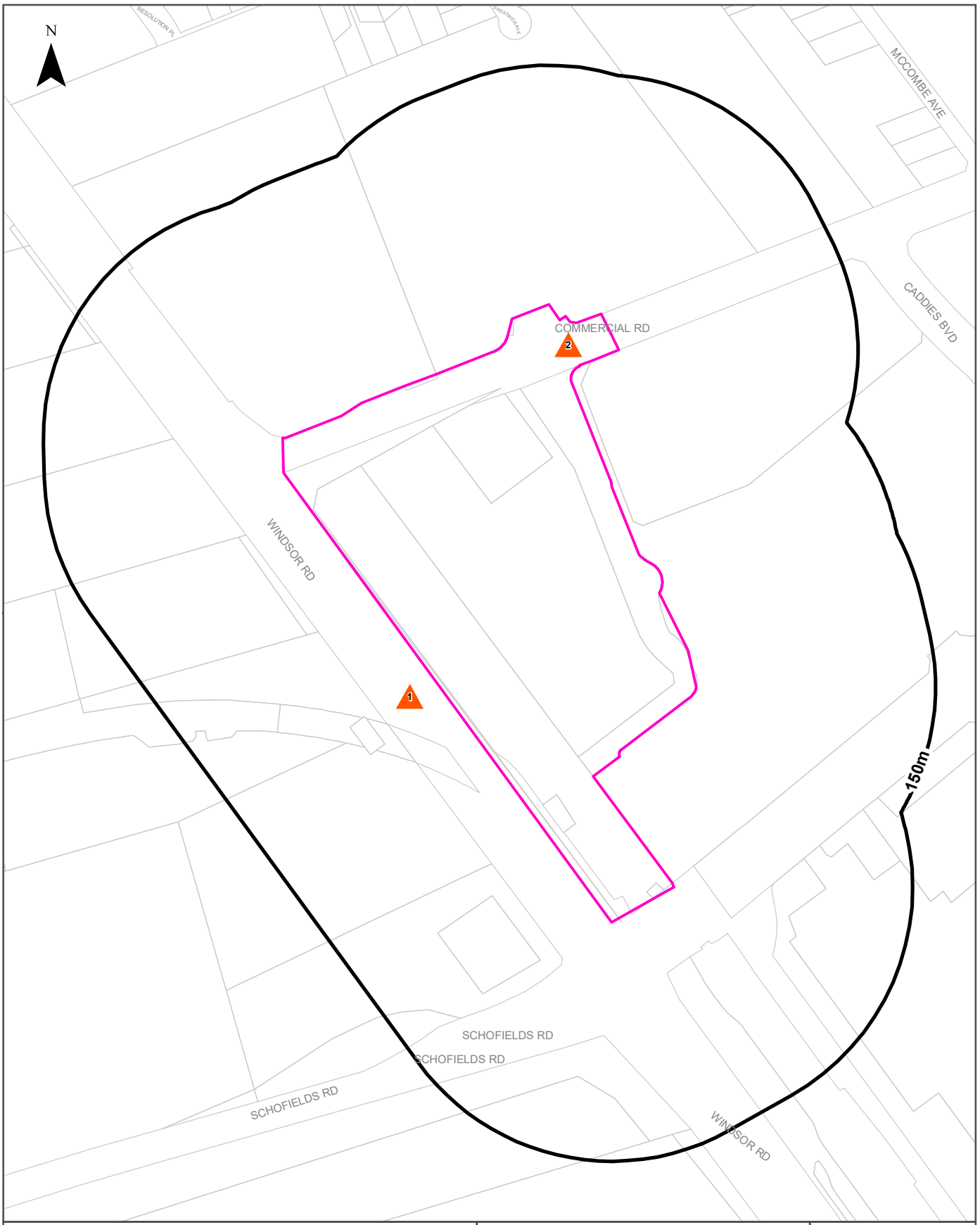
Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
3504	KNIGHTS SYNDICATE PTY LTD	KNIGHT'S SYNDICATE PTY LTD, 105 SCHOFIELDS ROAD, ROUSE HILL	Surrendered	08/01/2001	Crushing, grinding or separating	Premise Match	257m	South West
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	269m	North East
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	269m	North East
5446	SYDNEY WATER CORPORATION	BAULKHAM HILLS (including Rouse Hill Development Area) - NSW 2153	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	269m	North East
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	269m	North East
12154	JOHN HOLLAND PTY LTD	-, KELLYVILLE, NSW 2155	Surrendered	16/08/2004	Crushing, grinding or separating	Premise Match	798m	West
12154	JOHN HOLLAND PTY LTD	-, KELLYVILLE, NSW 2155	Surrendered	16/08/2004	Sewage treatment processing by small plants	Premise Match	798m	West

Former Licensed Activities Data Source: Environment Protection Authority

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Historical Business Directories

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Legend

- Site Boundary
- Buffer 150m
- Property Boundary
- Business directory records mapped to a specific premise
- Business directory records mapped to a road intersection
- Business directory records mapped to a road corridor
- Business directory records mapped to a general area

Scale: 0 40 80 120 160 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 July 2025

Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018
Property Boundaries © NSW Department Finance, Services & Innovation 2025

Historical Business Directories

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Business Directory Records 1950-1991
Premise or Road Intersection Matches

Potentially contaminative business activities extracted from Universal Business Directories from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

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Business Directory Records 1950-1991
Road or Area Matches

Potentially contaminative business activities extracted from Universal Business Directories from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	Butchers Wholesale	Bush, A. J. (Manufacturers) Pty. Ltd., Windsor Rd., Rouse Hill 2155	37759	1991	Road Match	0m
	Agricultural Machinery &/or Parts &/or Imps &/or Dists	Hardi Pumps & Sprayers N.S.W. Pty. Ltd., Windsor Rd. Rouse Hill 2155	33650	1991	Road Match	0m
	Motor Panel Beaters &/or Spray Painters	Kirkpatrick & Marshall, Windsor Rd Rouse Hill 2155	54514	1991	Road Match	0m
	Stock Foods &/or Additives Mfrs &/or Dists	Rouse Hill Meats Pty Ltd, Windsor Rd Rouse Hill 2155	63560	1991	Road Match	0m
	ANIMAL &/OR BIRD FOOD SUPPLIES.	Burns Animal Food Co. Pty. Pty., Windsor Rd., Rouse Hill. 2153	3012	1986	Road Match	0m
	ANIMAL &/OR BIRD SUPPLIES.	Burns Animal Food Co. Pty. Pty., Windsor Rd., Rouse Hill. 2153	3075	1986	Road Match	0m
	BUTCHERS-WHOLESALE.	Bush, A. J. (Manufacturers) Pty. Ltd., Windsor Rd., Rouse Hill.2153	10902	1986	Road Match	0m
	AGRICULTURAL MACHINERY MFRS. &/OR IMPS. &/OR DISTS.	Hardi Pumps & Sprayers N.S.W Pty. Ltd., Windsor Rd., Rouse Hill. 2153	1753	1986	Road Match	0m
	SPRAYING EQUIPMENT MFRS. &/OR DISTS.	Hardi Pumps & Sprayers N.S.W. Pty. Ltd., Windsor Rd., Rouse Hill 2153	87767	1986	Road Match	0m
	PUMPS &/OR PUMPING EQUIPMENT MFRS.' &/OR DISTS.	Hardi Pumps & Sprayers N.S.W. Pty. Ltd., Windsor Rd., Rouse Hill. 2153	78600	1986	Road Match	0m
	AGRICULTURAL MACHINERY REPAIRS.	Hardi Pumps & Sprayers N.S.W. Pty. Ltd., Windsor Rd., Rouse Hill.2153	1786	1986	Road Match	0m
	AGRICULTURAL SPRAY EQUIPMENT MFRS. &/OR DISTS.	Hardi Pumps & Sprayers N.S.W. Pty. Ltd., Windsor Rd., Rouse Hill.2153	1796	1986	Road Match	0m
	AGRICULTURAL MACHINERY PARTS MFRS. &/OR IMPS. &/OR DISTS.	Hardi Pumps & Sprayers NS.W. Pty. Ltd., Windsor Rd., Rouse Hill.2153	1781	1986	Road Match	0m
	PUMP MFRS. &/OR DISTS.	Hardl Pumps & Sprayers N.S.W. Pty. Ltd., Windsor Rd., Rouse Hill. 2153	78487	1986	Road Match	0m
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Kirkpatrick & Marshall, Windsor Rd., Rouse Hill. 2153	66461	1986	Road Match	0m
	STOCK FOODS MFRS. &/OR DIST.	Rouse Hill Meats Pty, Ltd., Windsor Rd., Rouse Hill., 2153	89379	1986	Road Match	0m
	DOG FOOD &/OR MEDICINEMFRS. (D5250)	Burns Animal Food Co, Pty. Ltd., Windsor Rd., Rouse Hill. 2153.	21895	1982	Road Match	0m
	ANIMAL &/OR BIRD FOOD SUPPLIES. (A5880)	Burns Animal Food Co. Pty, Ltd., Windsor Rd., Rouse Hill. 2153.	2713	1982	Road Match	0m
	BUTCHERS - WHOLESALE. (B8120)	Bush, A. J. (Manufacturers) Pty. Ltd, Windsor Rd., Rouse Hill. 2153.	11877	1982	Road Match	0m
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Kirkpatrick & Marshall, Windsor Rd., Rouse Hill. 2153.	58445	1982	Road Match	0m
	STOCK FOODS MFRS. &/OR DISTS. (S7065)	Rouse Hill Meats Pty. Ltd., Windsor Rd., Rouse Hill. 2153	77317	1982	Road Match	0m
	GOLF LINKS	Braeside Picnic Golf Course (L. G. Brown, Propr.), Windsor Rd. Rouse Hill	155906	1950	Road Match	0m
	STUD FARMS	Riverstone Hall Stud Farm, Windsor Rd. Rouse Hill	155909	1950	Road Match	0m
2	CARRIERS &/OR CARTAGE CONTRACTORS.	M D.G. Haulage Pty. Ltd., Lot 1 Commercial Rd., Rouse Hill. 2153	12907	1986	Road Match	0m
	EARTH MOVING MACHINERY HIRERS.	M D.G. Haulage Pty. Ltd., Lot 1 Commercial Rd., Rouse Hill. 2153	25858	1986	Road Match	0m
	HAULAGE CONTRACTORS.	M.D.G. Haulage Pty. Ltd., Lot 1 Commercial Rd., Rouse Hill. 2153	44949	1986	Road Match	0m
	LANDSCAPERS.	Supafortruss Soil Supplies, Lot 1 Commercial Rd., Rouse Hill. 2153	51002	1986	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
2	CARRIERS &/OR CARTAGE CONTRACTORS. (C2115)	M.D.G Haulage Pty. Ltd, Lot 1 Commercial Rd., Rouse Hill 2766	13740	1982	Road Match	0m
	EARTH MOVING MACHINERYHIRERS. (E0270)	M.D.G. Haulage Pty. Ltd., Lot 1 Commercial Rd., Rouse Hill. 2766.	24368	1982	Road Match	0m
	HAULAGE CONTRACTORS. (H2750)	M.D.G. Haulage Pty. Ltd., Lot 1 Commercial Rd., Rouse Hill. 2766.	39437	1982	Road Match	0m
	GRAVEL, SAND &/OR SOIL SUPPLIES. (G7050)	Supafortruss Soil Supplies, Lot 1 Commercial Rd., Rouse Hill. 2766.	37221	1982	Road Match	0m
	LANDSCAPE GARDENERS. (L1350)	Supafortruss Soil Supplies, Lot 1 Commercial Rd., Rouse Hill. 2766.	44667	1982	Road Match	0m

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Historical Business Directories

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Dry Cleaners, Motor Garages & Service Stations 1948-1993 Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a premise or road intersection, within the dataset buffer.

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

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Dry Cleaners, Motor Garages & Service Stations 1948-1993 Road or Area Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

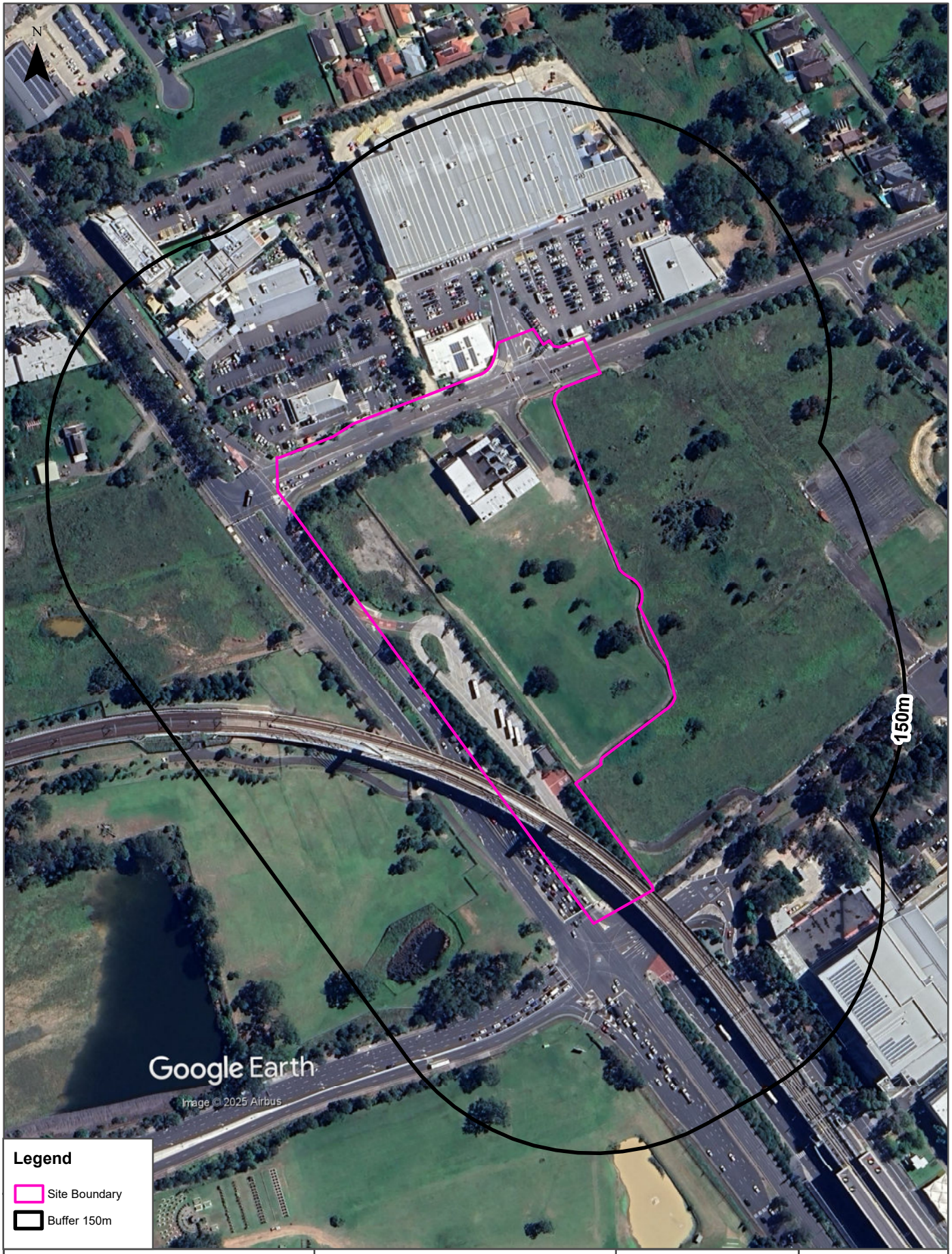
Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer					

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Aerial Imagery 2025

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale:	Data Source Aerial Imagery: © 2025 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 July 2025

0 30 60 90 120 Meters

Aerial Imagery 2014

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale: 0 30 60 90 120 Meters	Data Source Aerial Imagery: © 2025 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 July 2025

Aerial Imagery 2004

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale: 0 30 60 90 120 Meters	Data Source Aerial Imagery: © 2025 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 July 2025

Aerial Imagery 1994

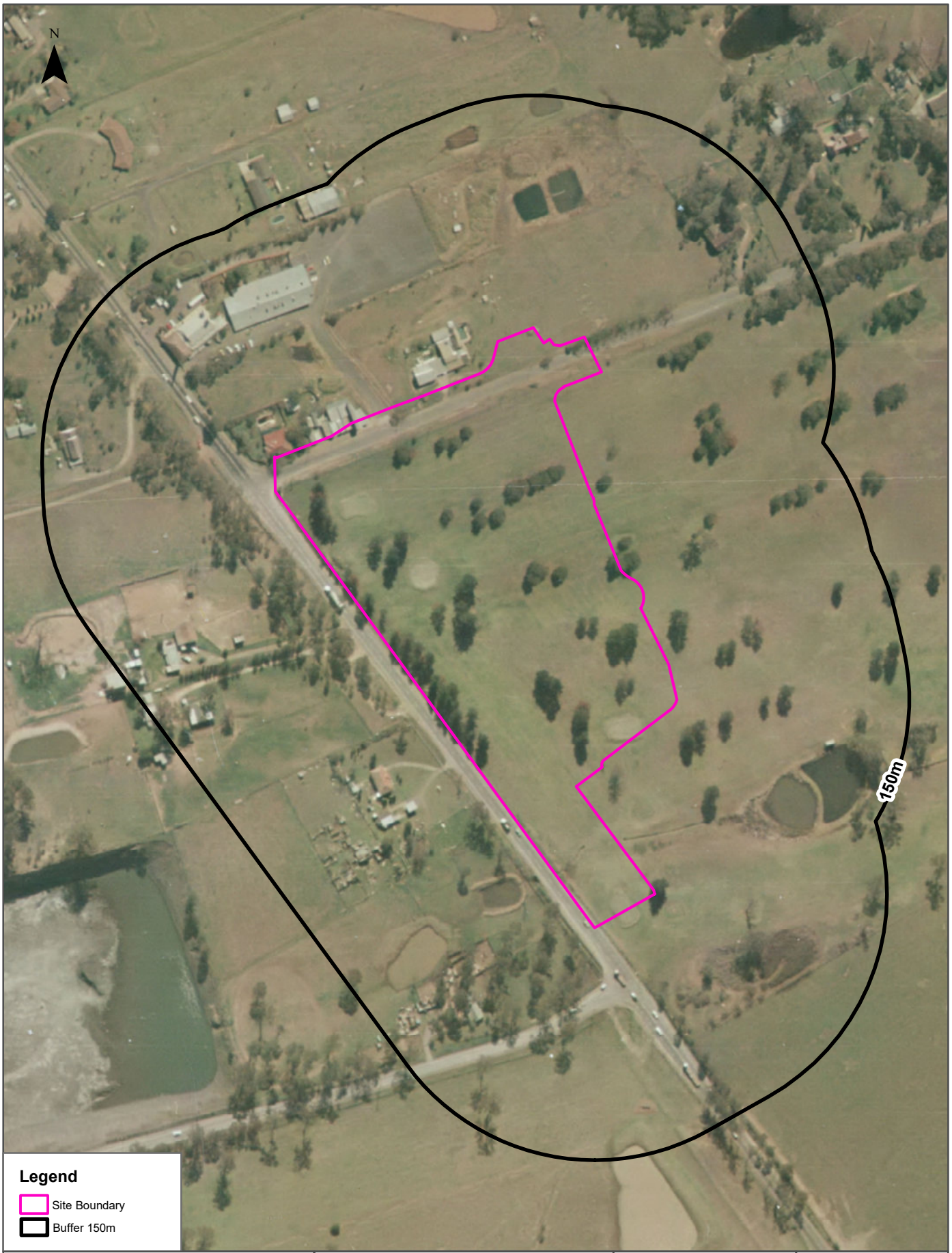
Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 14 July 2025
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Aerial Imagery 1991

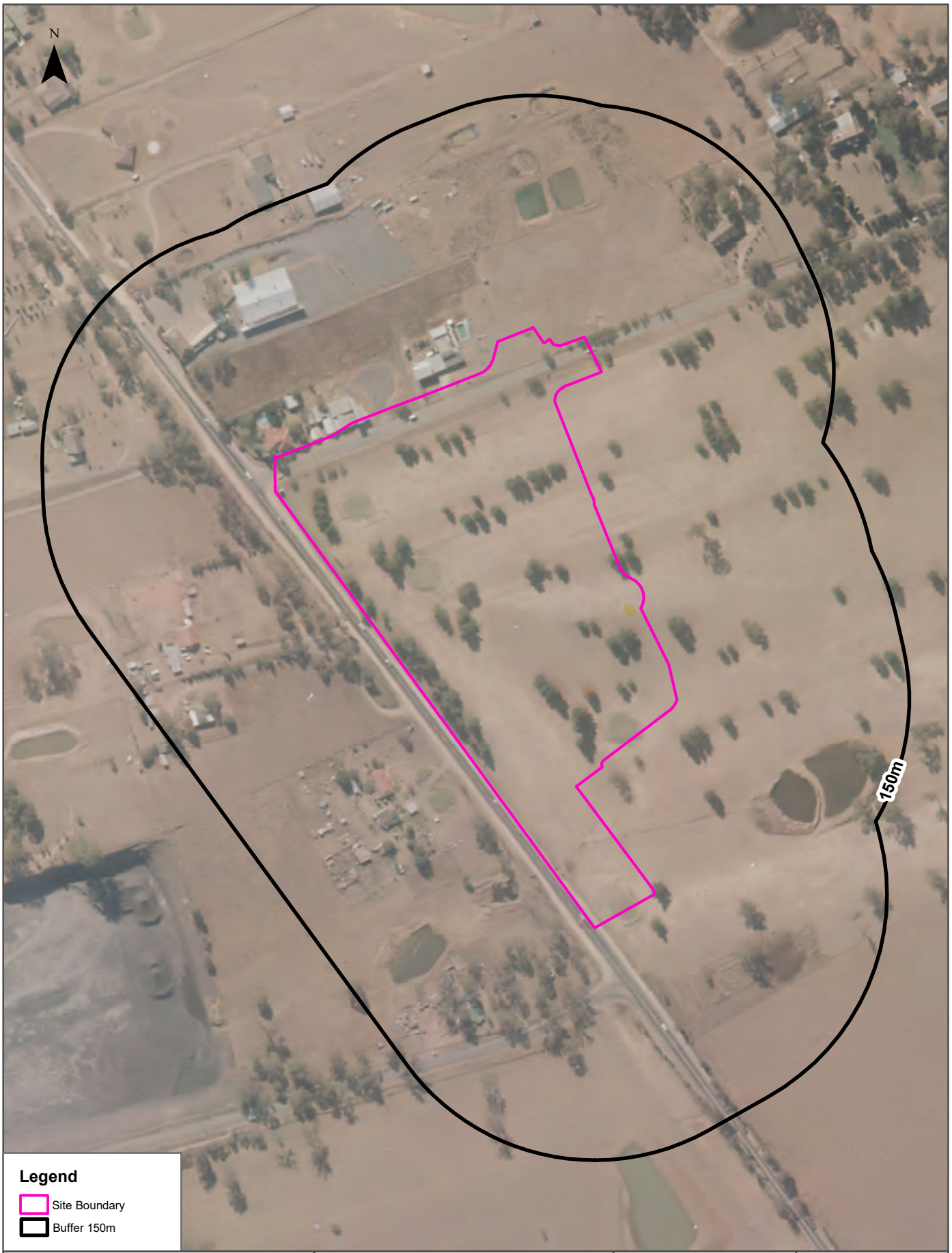
Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 14 July 2025
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Aerial Imagery 1986

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Aerial Imagery 1982

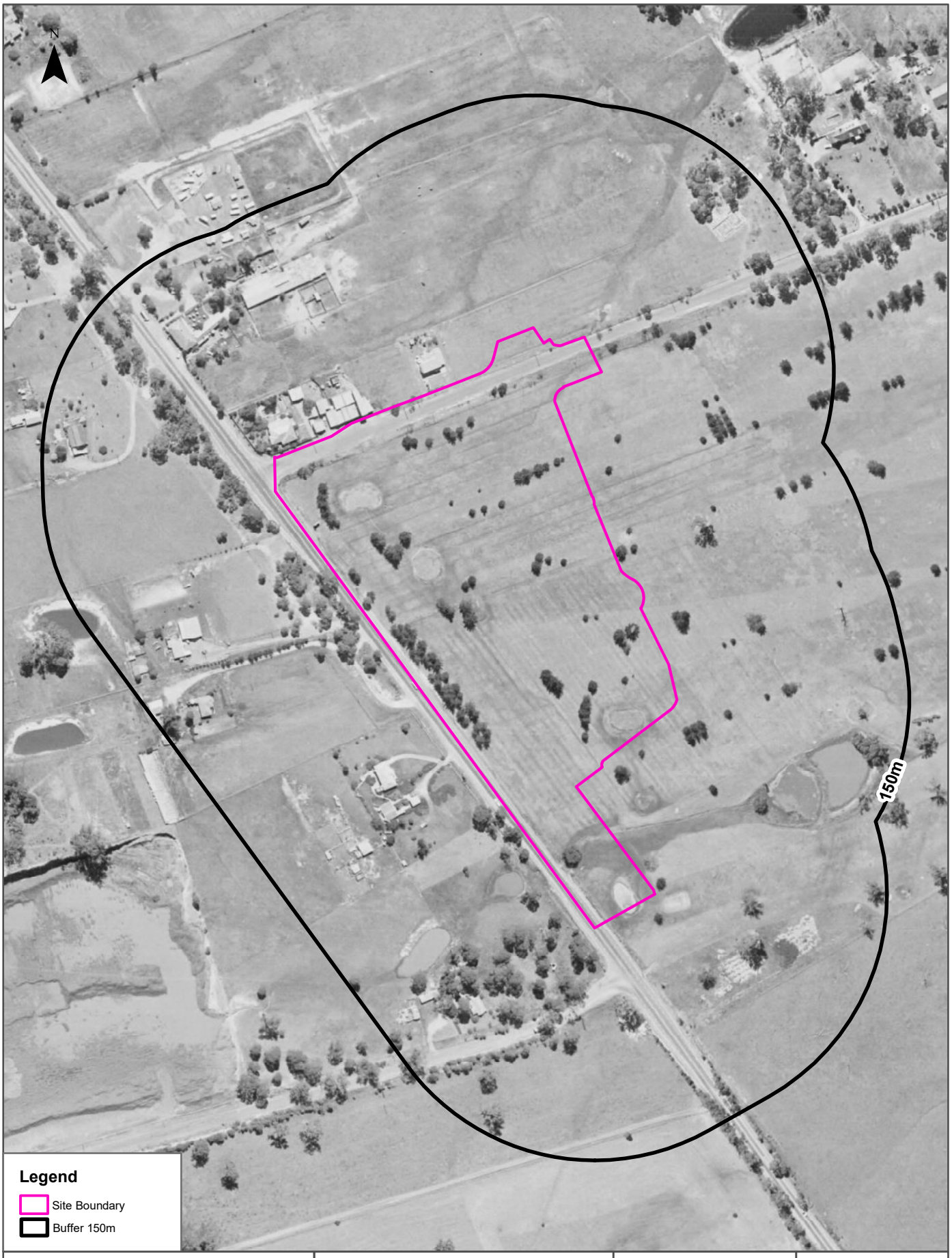
Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 14 July 2025
0 30 60 90 120 Meters	© NSW Department of Customer Service	GDA 1994 MGA Zone 56	

Aerial Imagery 1978

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale: 0 30 60 90 120 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 14 July 2025

Aerial Imagery 1970

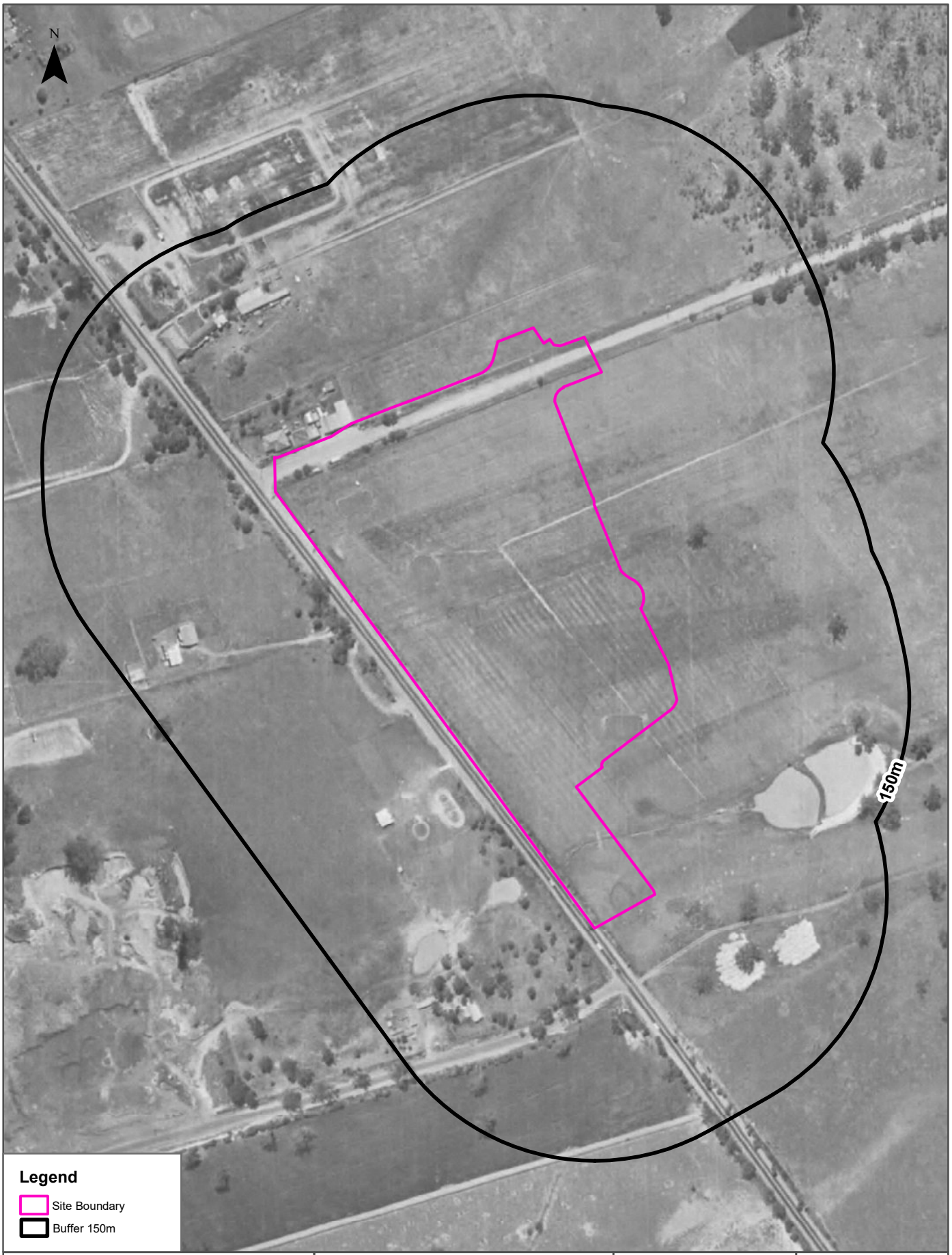
Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 14 July 2025
0 30 60 90 120 Meters	© NSW Department of Customer Service	GDA 1994 MGA Zone 56	

Aerial Imagery 1965

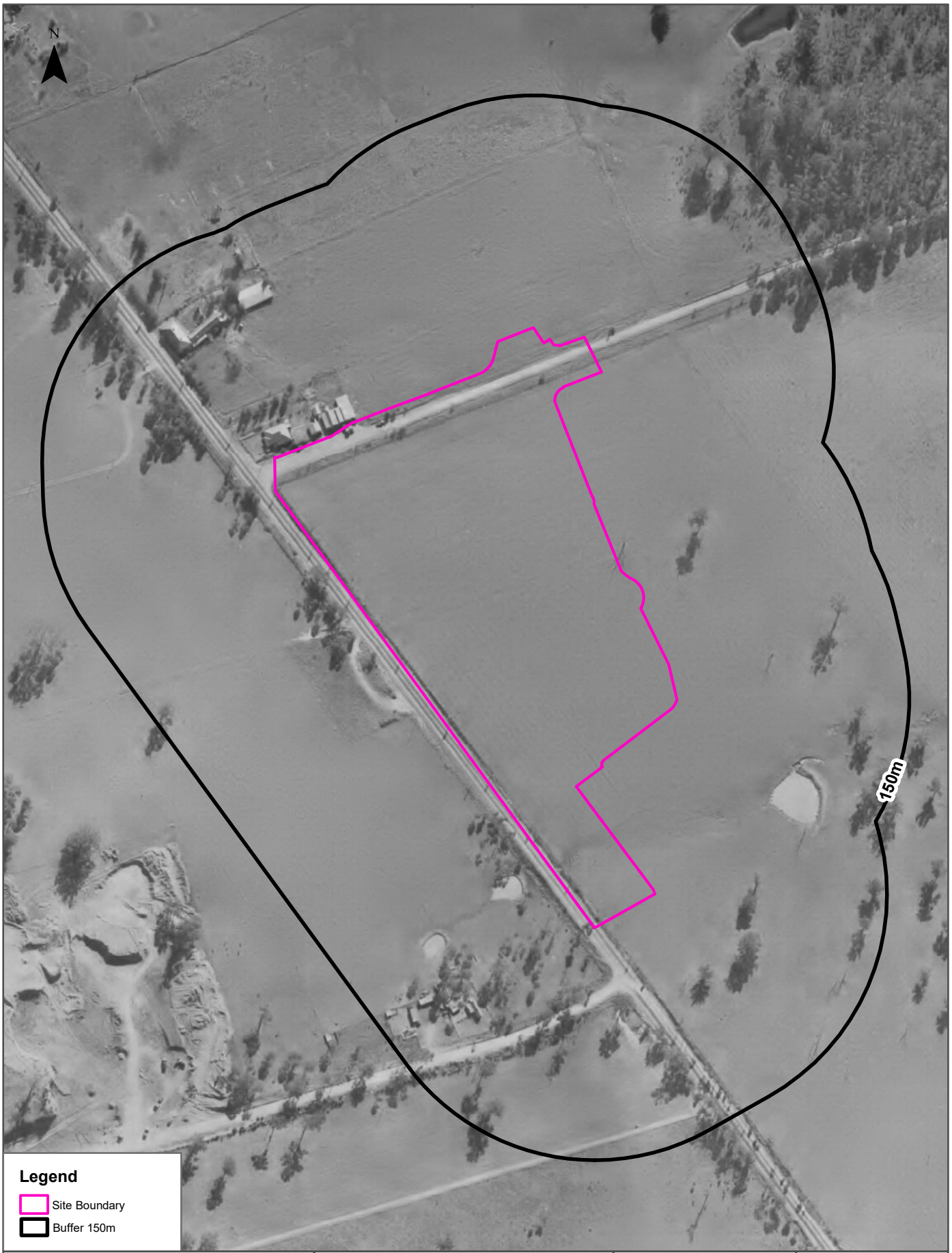
Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 14 July 2025
0 30 60 90 120 Meters	© NSW Department of Customer Service	GDA 1994 MGA Zone 56	

Aerial Imagery 1961

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 14 July 2025
0 30 60 90 120 Meters	© NSW Department of Customer Service	GDA 1994 MGA Zone 56	

Aerial Imagery 1955, 1956

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Aerial Imagery 1949

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Aerial Imagery 1930

Commercial & Windsor Roads, Rouse Hill, NSW 2155

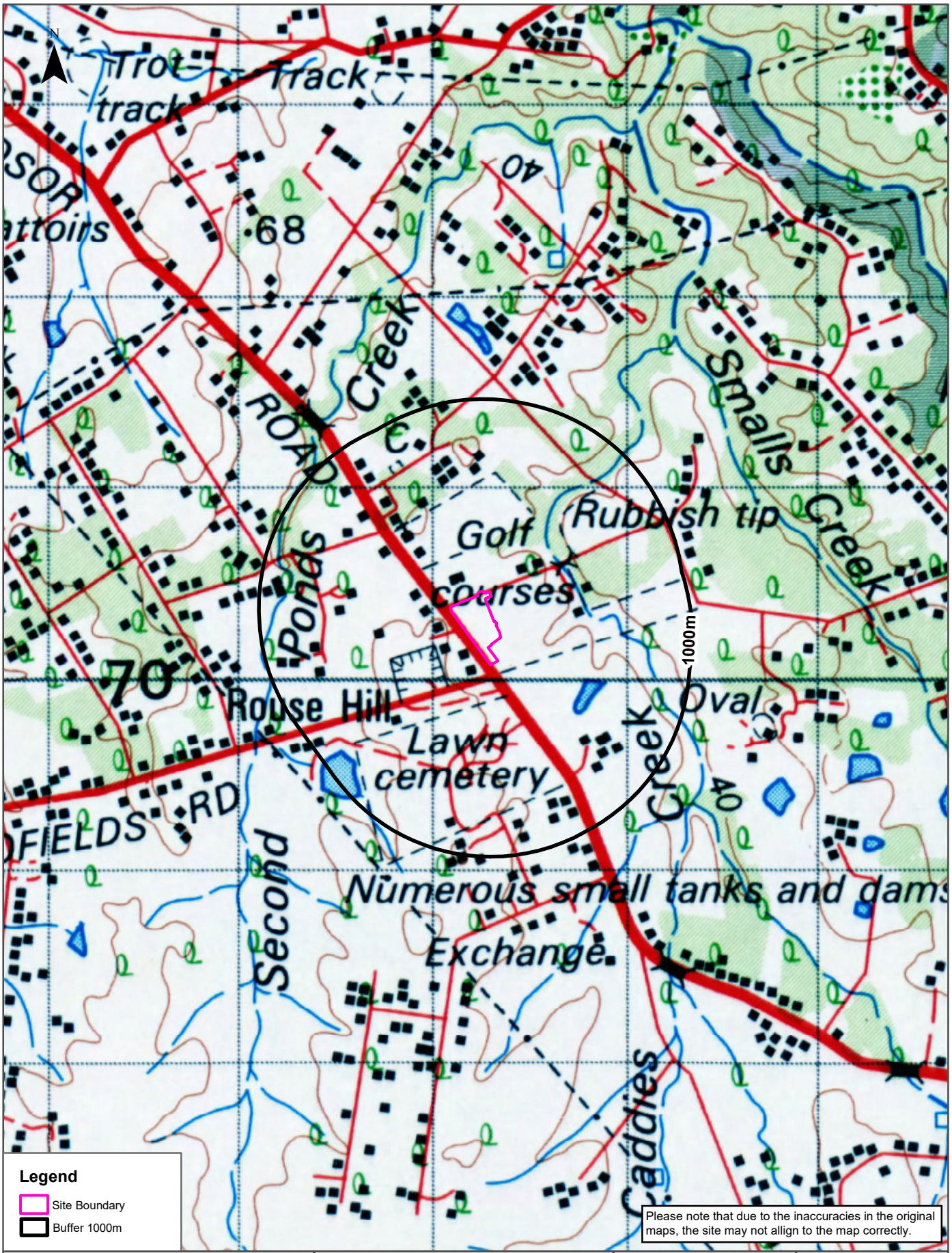


Scale:	Data Sources: Aerial Imagery: © Geoscience Australia	Coordinate System: GDA 1994 MGA Zone 56	Date: 14 July 2025

Scale: 0 30 60 90 120 Meters

Historical Map 1975

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale: 0 310 620 930 1,240 Meters

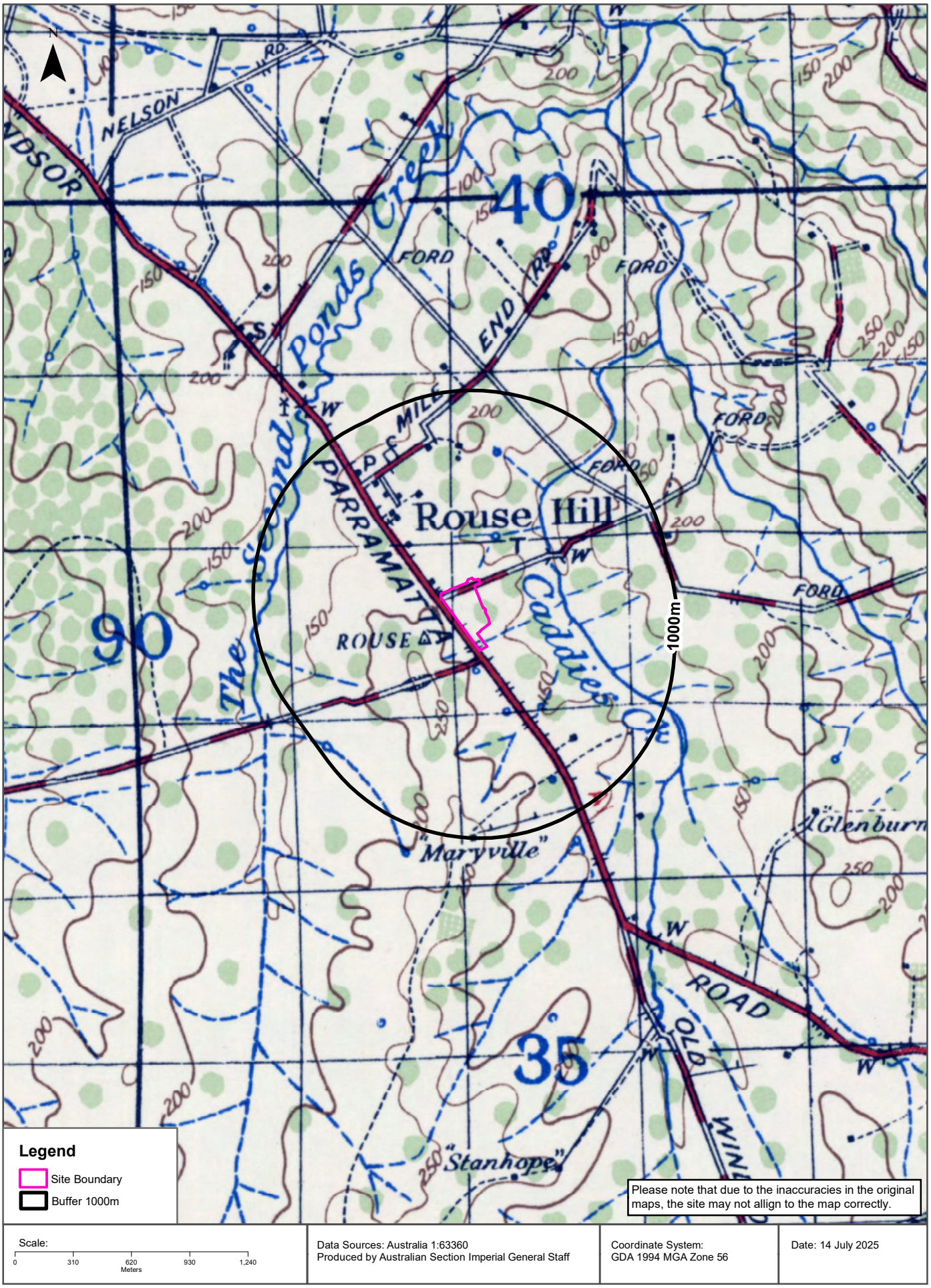
Data Sources: NATMAP 1:100,000
Topographic Maps Geoscience Australia

Coordinate System:
GDA 1994 MGA Zone 56

Date: 14 July 2025

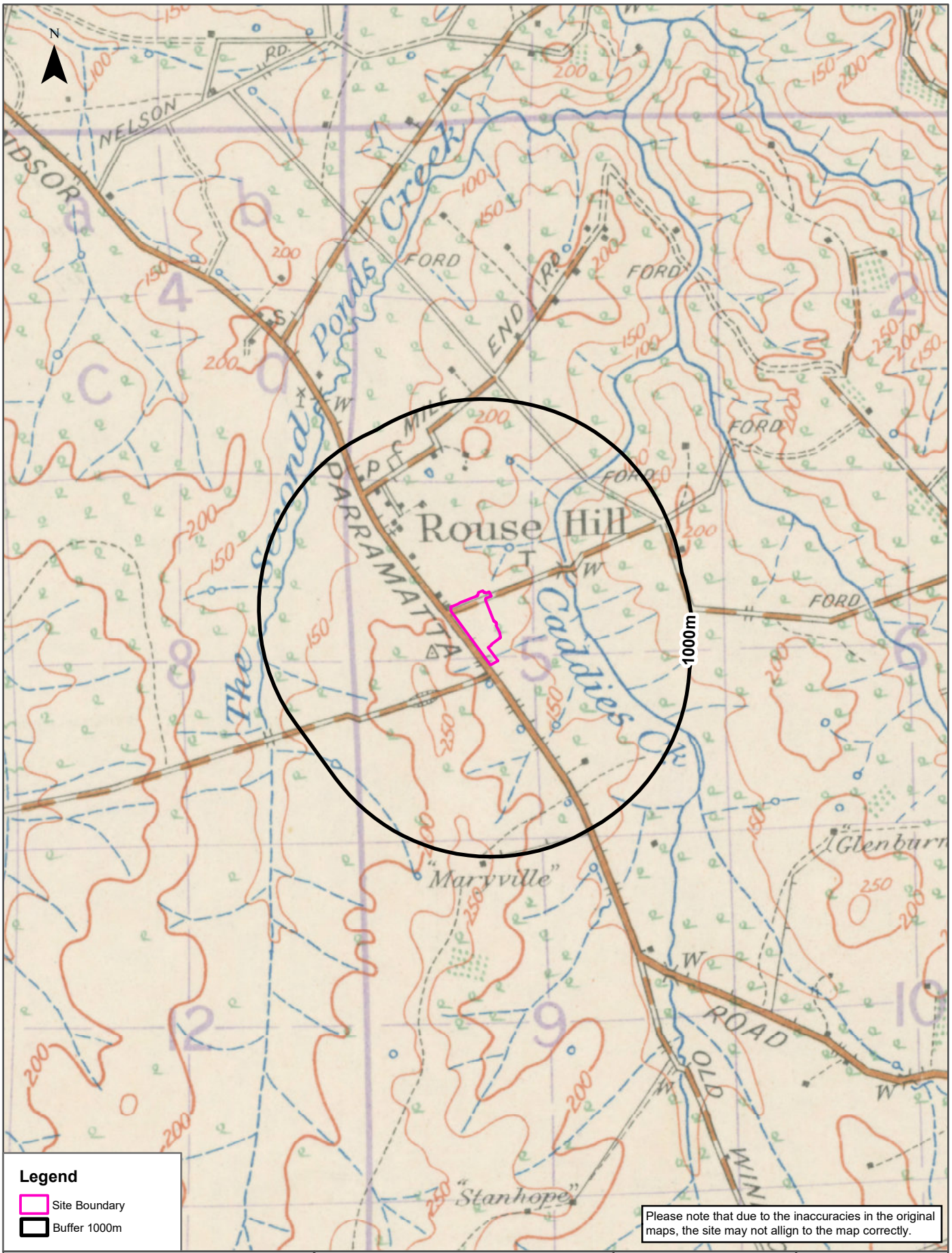
Historical Map c.1942

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Historical Map c.1929

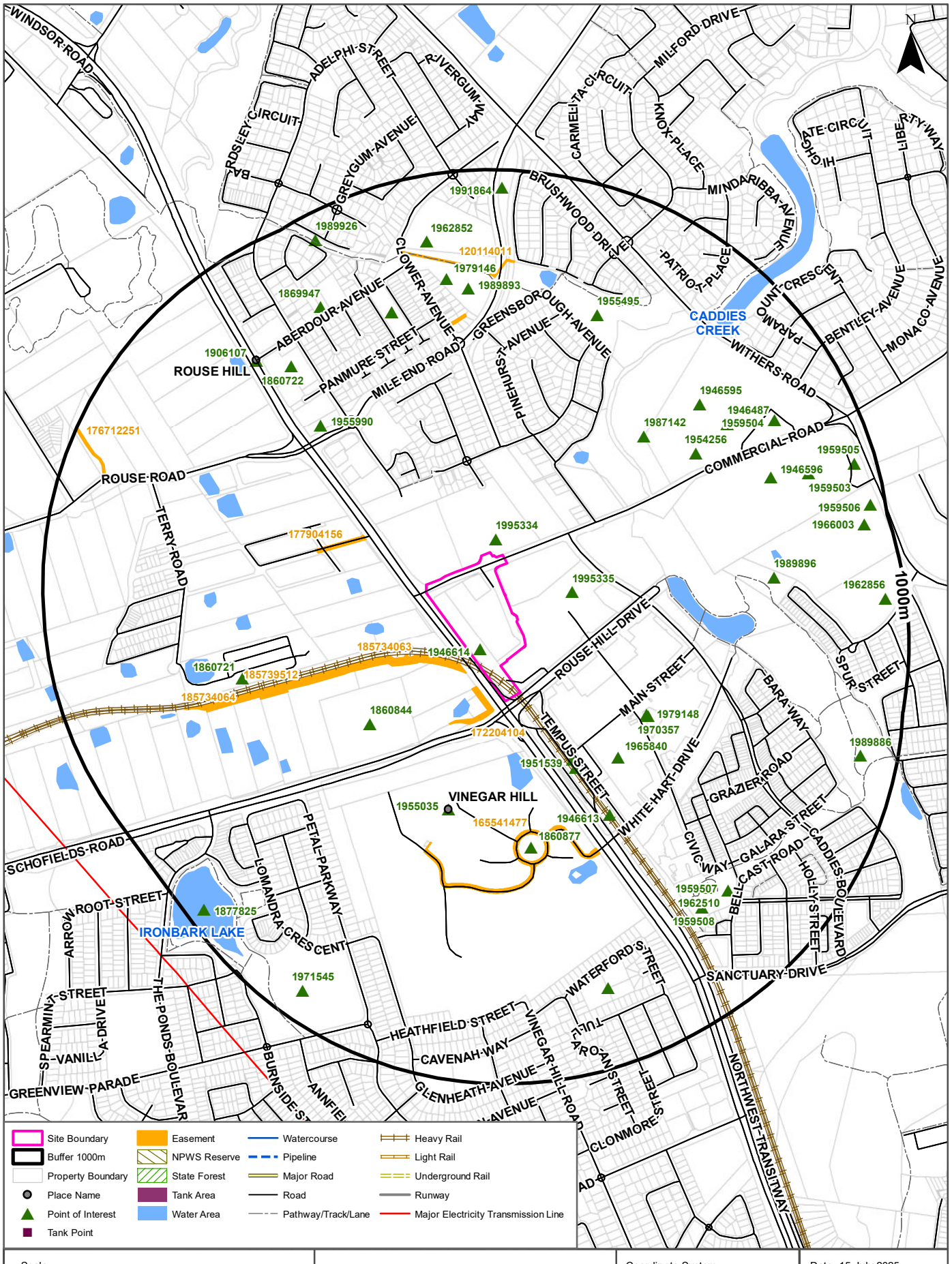
Commercial & Windsor Roads, Rouse Hill, NSW 2155



Scale: 0 310 620 930 1,240 Meters	Data Sources: Australia 1:63360 Produced by Australian Section Imperial General Staff	Coordinate System: GDA 1994 MGA Zone 56	Date: 14 July 2025

Topographic Features

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2025

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 July 2025

Topographic Features

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
1946614	Parking Area	Parking Area	0m	On-site
1995334	Parking Area	Parking Area	37m	North
1995335	Parking Area	Parking Area	158m	East
1951539	Bus Interchange	ROUSE HILL BUS INTERCHANGE	222m	South East
1995762	Railway Station	ROUSE HILL RAILWAY STATION	245m	South East
1965840	Post Office	ROUSE HILL TOWN CENTRE POST OFFICE	306m	South East
1955035	Urban Place	VINEGAR HILL	319m	South
1860844	Quarry - Open Cut	Quarry - Open Cut	321m	South West
1979148	Community Facility	VINEGAR HILL MEMORIAL COMMUNITY CENTRE	335m	South East
1970357	Library	ROUSE HILL LIBRARY	339m	South East
1860877	Cemetery	CASTLEBROOK MEMORIAL PARK	388m	South
1946613	Parking Area	Parking Area	396m	South East
1987142	Park	WITHERS ROAD RESERVE	481m	North East
1955990	Place Of Worship	ANGLICAN CHURCH	498m	North West
1860721	Tourist Park / Home Village	OK CARAVAN PARK	528m	West
1954256	Sports Field	BASEBALL FIELD	569m	North East
1946595	Sports Field	CRICKET GROUND	647m	North East
1989896	Park	IRONBARK RIDGE RESERVE	670m	East
1860722	Post Office	ROUSE HILL POST OFFICE	670m	North West
1955495	Park	WILLIAM HARVEY RESERVE	673m	North
1879272	Park	ABERDOUR VILLAGE RESERVE	677m	North
1989909	Park	ABERDOUR VILLAGE RESERVE	677m	North
1946487	Park	THE HILLS CENTENARY PARK	677m	North East
1989893	Park	ABERDOON HOMESTEAD RESERVE	692m	North
1962510	Tourist Information Centre	ROUSE HILL VISITOR INFORMATION CENTRE	707m	South East
1979146	Community Facility	ROUSE HILL COMMUNITY CENTRE	722m	North
1946596	Park	BRUCE PURSER RESERVE	724m	North East
1959508	Sports Court	TENNIS COURT	734m	South East
1906107	Suburb	ROUSE HILL	734m	North West
1959507	Sports Court	TENNIS COURT	748m	South East
1869947	Cemetery	ROUSE HILL CEMETERY	773m	North West
1959504	Parking Area	Parking Area	791m	North East

Map Id	Feature Type	Label	Distance	Direction
1946492	Park	VINEGAR HILL RESERVE	795m	South
1959503	Sports Field	OVAL	822m	North East
1962852	Primary School	ROUSE HILL PUBLIC SCHOOL	828m	North
1989886	Park	BARA WAY RESERVE	903m	East
1971545	Park	LAKES EDGE PARK	923m	South West
1989926	Park	MCCABE PLACE RESERVE	932m	North West
1966003	High School	ROUSE HILL HIGH SCHOOL	936m	East
1959505	Parking Area	Parking Area	943m	East
1962856	Primary School	IRONBARK RIDGE PUBLIC SCHOOL	946m	East
1991864	Park	BRUSHWOOD DRIVE RESERVE	954m	North
1877825	Manmade Waterbody	IRONBARK LAKE	956m	South West
1959506	Parking Area	Parking Area	961m	East

Topographic Data Source: © Land and Property Information (2015)
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Tanks (Areas)

What are the Tank Areas located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks (Points)

What are the Tank Points located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks Data Source: © Land and Property Information (2015)
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Major Easements

What Major Easements exist within the dataset buffer?
Note. Easements provided by LPI are not at the detail of local governments. They are limited to major easements such as Right of Carriageway, Electrical Lines (66kVa etc.), Easement to drain water & Significant subterranean pipelines (gas, water etc.).

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
172204104	Primary	Right of way	variable width	38m	South
185734063	Primary	Right of way		40m	South West
177904156	Primary	Right of way	6.5 & 2.5 & VAR	197m	North West
165541477	Primary	Right of way	VAR	343m	South
185739512	Primary	Right of way		437m	West
120118356	Primary	Undefined		601m	North
185734064	Primary	Right of way		647m	West
120114011	Primary	Undefined		720m	North
176712251	Secondary	Easement for Access	5m	883m	North West

Easements Data Source: © Land and Property Information (2015)
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State Forest

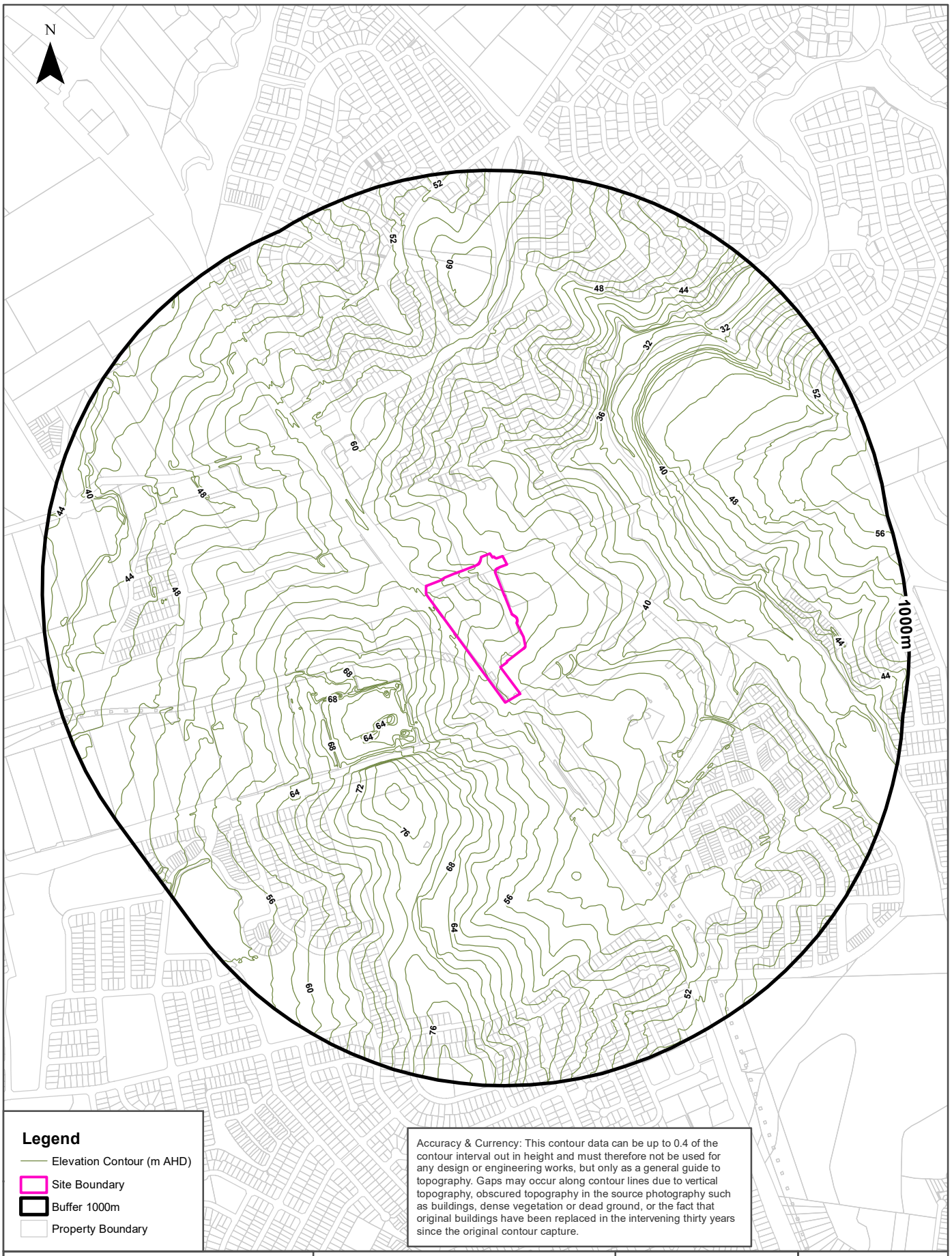
What State Forest exist within the dataset buffer?

State Forest Number	State Forest Name	Distance	Direction
N/A	No records in buffer		

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)
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Elevation Contours (m AHD)

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Hydrogeology & Groundwater

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive aquifers of low to moderate productivity	0m	On-site

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2024

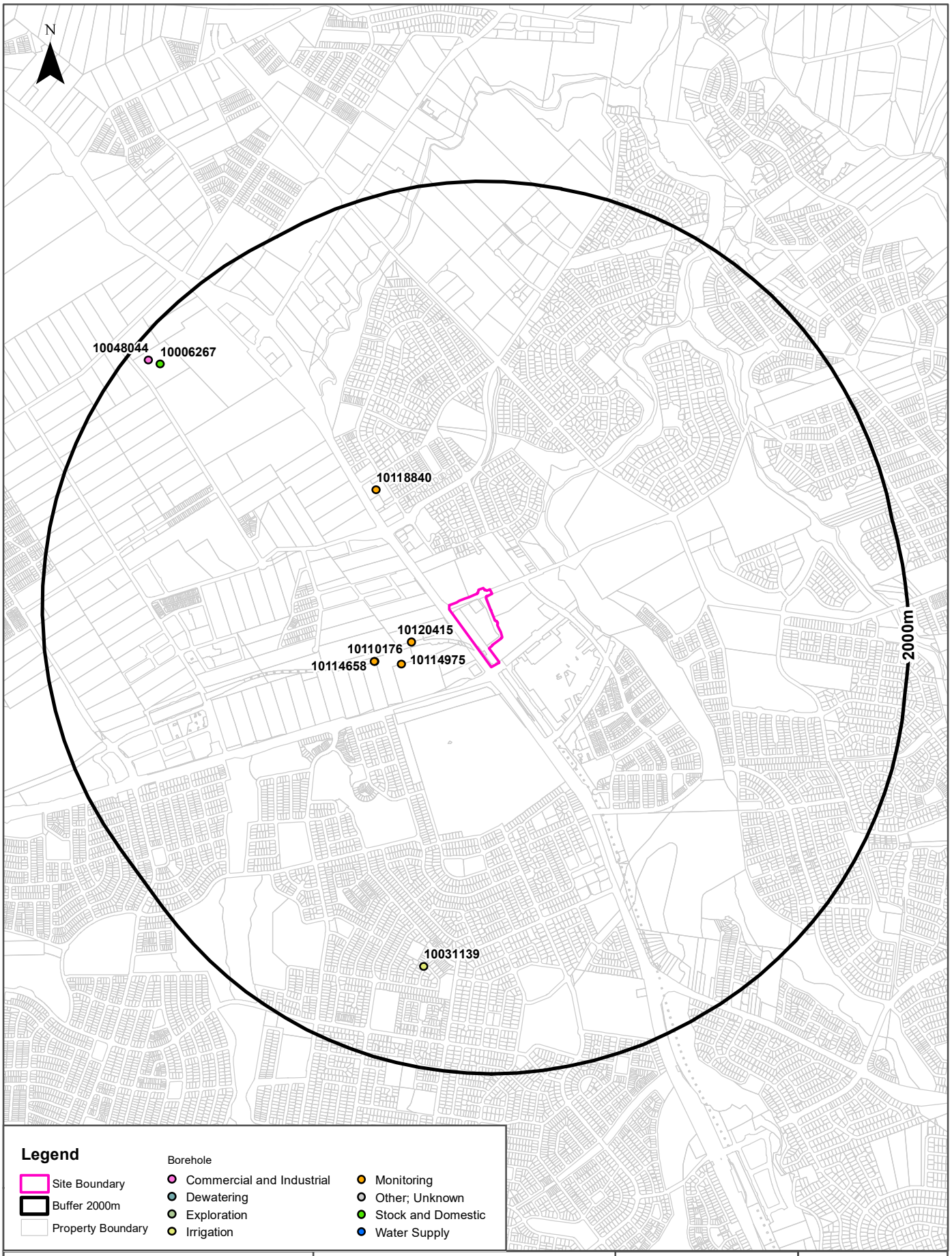
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

Prohibition Area No.	Prohibition	Distance	Direction
N/A	No records in buffer		

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2024 Data Source : NSW Department of Primary Industries

Groundwater Boreholes

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Hydrogeology & Groundwater

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Groundwater Boreholes

Boreholes within the dataset buffer:

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10120415	GW115516	Monitoring	Functional	06/02/2016	18.00		AHD				245m	West
10114975	GW115513	Monitoring	Functional	02/02/2016	20.00		AHD				348m	South West
10110176	GW115515	Monitoring	Functional	03/02/2016	4.50		AHD				447m	West
10114658	GW115514	Monitoring	Functional	03/02/2016	18.00		AHD				448m	West
10118840	GW107600	Monitoring	Unknown	01/11/2002	29.40		AHD				670m	North West
10031139	GW047282	Irrigation	Unknown	01/02/1979	152.00		AHD				1511m	South
10006267	GW054878	Stock and Domestic	Functioning	01/11/1981	7.00		AHD	Stock			1850m	North West
10048044	GW107940	Commercial and Industrial	Unknown	22/08/2005	240.00		AHD	4500	1.100		1905m	North West

Borehole Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Driller's Logs

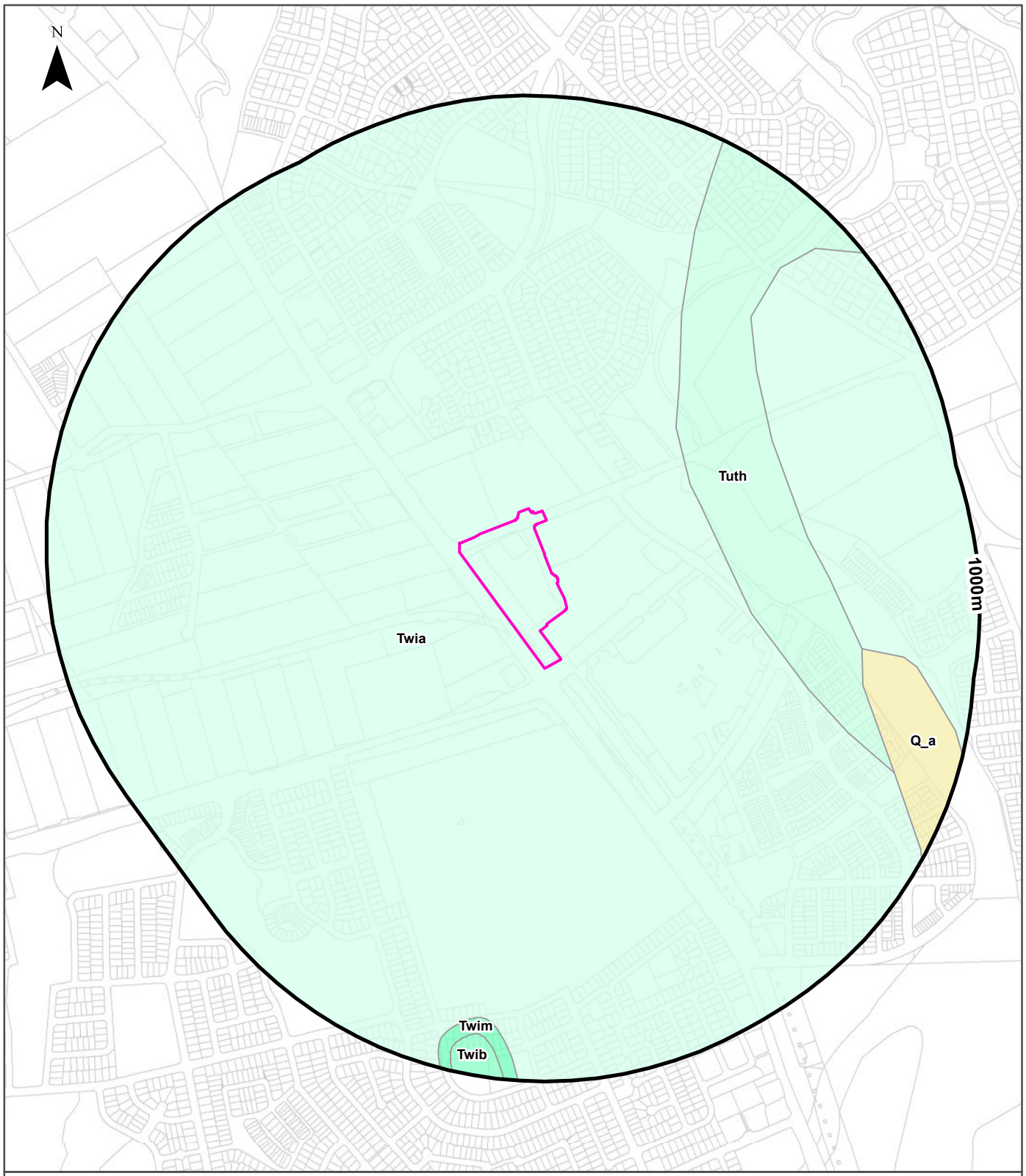
Drill log data relevant to the boreholes within the dataset buffer:

NGIS Bore ID	Drillers Log	Distance	Direction
10118840	0.00m-3.05m CLAYEY SILT 3.05m-10.83m SHALE 10.83m-29.40m SANDSTONE	670m	North West
10031139	0.00m-0.40m Topsoil Dark 0.40m-1.20m Clay 1.20m-6.80m Shale Clay 6.80m-60.30m Shale Water Supply 60.30m-61.00m Shale Sandstone 61.00m-83.80m Sandstone Grey 83.80m-84.20m Shale Clay 84.20m-137.00m Sandstone Grey Silty 137.00m-138.60m Shale Clay 138.60m-152.00m Sandstone Grey Silty	1511m	South
10006267	0.00m-7.01m Soil Nominal 0.00m-7.01m Clay Nominal 0.00m-7.01m Shale Nominal	1850m	North West
10048044	0.00m-2.00m FILL 2.00m-5.00m BROWN SHALE 5.00m-39.00m SHALE 39.00m-92.00m SANDSTONE 92.00m-105.00m SANDSTONE,SHALE 105.00m-106.00m SHALE 106.00m-146.00m SANDSTONE, SHALE 146.00m-148.00m SHALE 148.00m-154.00m SANDSTONE, SHALE 154.00m-170.00m SANDSTONE 170.00m-180.00m SANDSTONE, SHALE 180.00m-184.00m SANDSTONE, QUARTZ 184.00m-190.00m SANDSTONE, SHALE 190.00m-194.00m SANDSTONE, QUARTZ 194.00m-198.00m SANDSTONE, SHALE,QUARTZ 198.00m-206.00m SANDSTONE, SHALE 206.00m-232.00m SANDSTONE, QUARTZ 232.00m-239.00m SANDSTONE 239.00m-240.00m SHALE	1905m	North West

Drill Log Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Geology

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Legend

Linear Geological Structures and Boundaries

Site Boundary	Trendline	Marker Bed	Miscellaneous Boundary
Report Buffer	Fold Axis	Faulted Boundary	Water/Coastline Boundary
Property Boundary	Geological Boundary	Shear Zone or Schist Zone Boundary	State/Territory Border

Scale: 0 100 200 400 600 Meters	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2025	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 July 2025

Geology

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Geological Units

Geological units within the dataset buffer:

Code	Unit Name	Description	Stratigraphy	Age Range	Dominant Lithology	Dist	Dir
Twia	Ashfield Shale	Black to light grey shale and laminite.	/Wianamatta Group//Ashfield Shale//	Middle Triassic (base) to Middle Triassic (top)	Shale	0m	On-site
Tuth	Hawkesbury Sandstone	Medium- to coarse-grained quartz sandstone displaying small- to large-scale, high-angle cross-bedding; minor shale and laminite lenses.	/Ungrouped Triassic units//Hawkesbury Sandstone//	Anisian (base) to Anisian (top)	Sandstone	358m	North East
Q_a	Alluvium	Unconsolidated grey to brown to beige humic (±)micaceous silty clay, quartz-(±)lithic silt, fine- to medium-grained quartz-rich to quartz-lithic sand, polymictic pebble to cobble gravel (as sporadic lenses); sporadic palaeosol horizons.	/Alluvium////	Quaternary (base) to Now (top)	Clastic sediment	721m	East
Twim	Minchinbury Sandstone	Fine- to medium-grained lithic sandstone.	/Wianamatta Group//Minchinbury Sandstone//	Middle Triassic (base) to Middle Triassic (top)	Sandstone	859m	South
Twib	Bringelly Shale	Shale, carbonaceous claystone, laminite, lithic sandstone, rare coal.	/Wianamatta Group//Bringelly Shale//	Middle Triassic (base) to Middle Triassic (top)	Shale	900m	South

Linear Geological Structures

Fault and shear or schist zone boundaries within the dataset buffer:

Map ID	Boundary Type	Feature Description	Fault Dip Angle	Fault Dip Direction	Dist	Dir
NA	No records in buffer					

Trendlines within the dataset buffer:

Map ID	Feature Description	Observation Method	Structure Name	Dist	Dir
NA	No records in buffer				

Fold axes within the dataset buffer:

Map ID	Feature Description	Observation Method	Structure Name	Dist	Dir
NA	No records in buffer				

Marker beds within the dataset buffer:

Map ID	Feature Description	Rock Unit Description	Dist	Dir
NA	No records in buffer			

Geological Data Source: Statewide Seamless Geology v2.4, NSW Department of Primary Industries and Regional Development
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Naturally Occurring Asbestos Potential

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Naturally Occurring Asbestos Potential

Naturally Occurring Asbestos Potential within the dataset buffer:

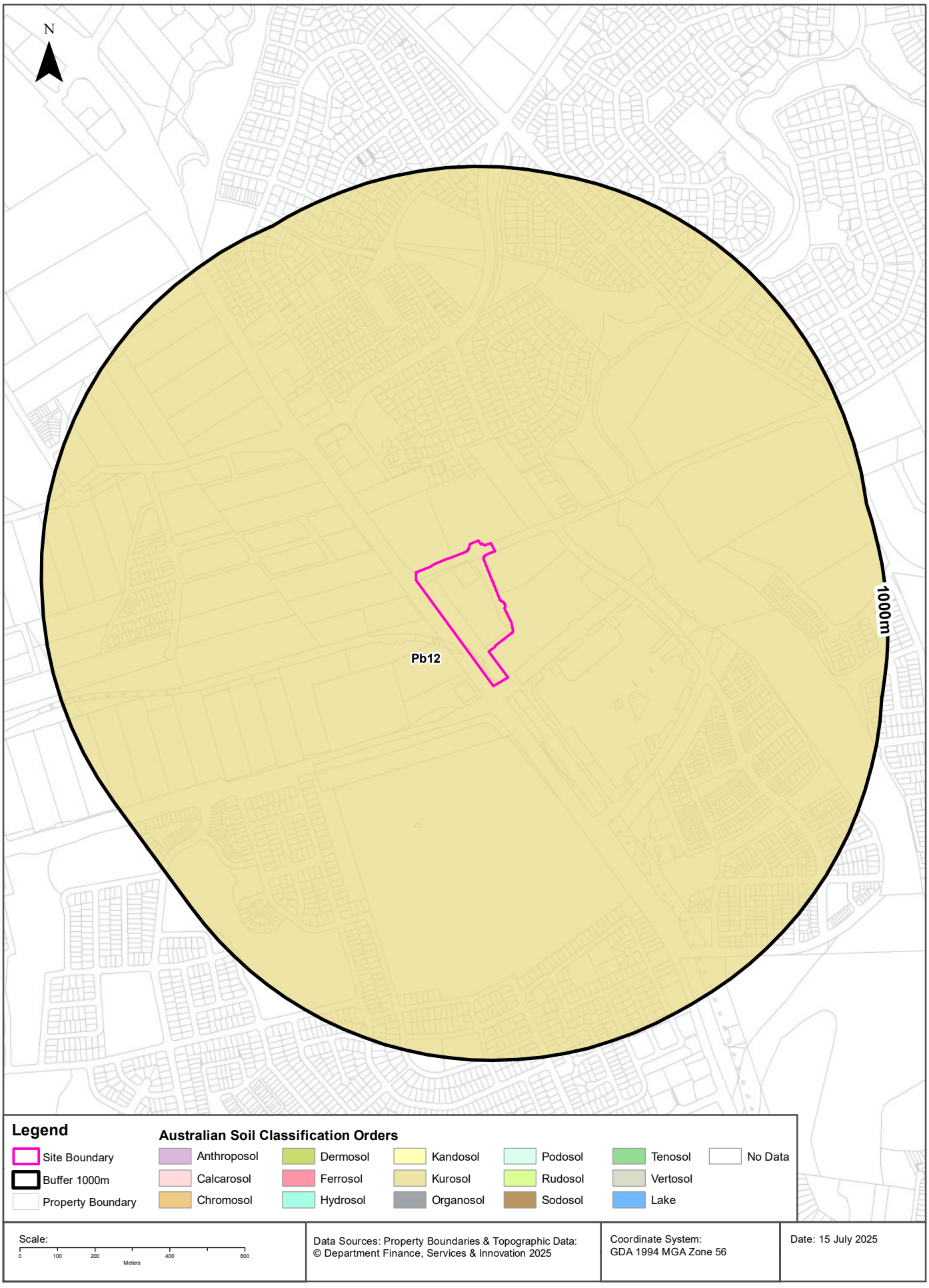
Potential	Sym	Strat Name	Group	Formation	Scale	Min Age	Max Age	Rock Type	Dom Lith	Description	Dist	Dir
No records in buffer												

Naturally Occurring Asbestos Potential Data Source: Statewide Seamless Geology v2.4, NSW Department of Primary Industries and Regional Development

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Atlas of Australian Soils

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Soils

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Atlas of Australian Soils

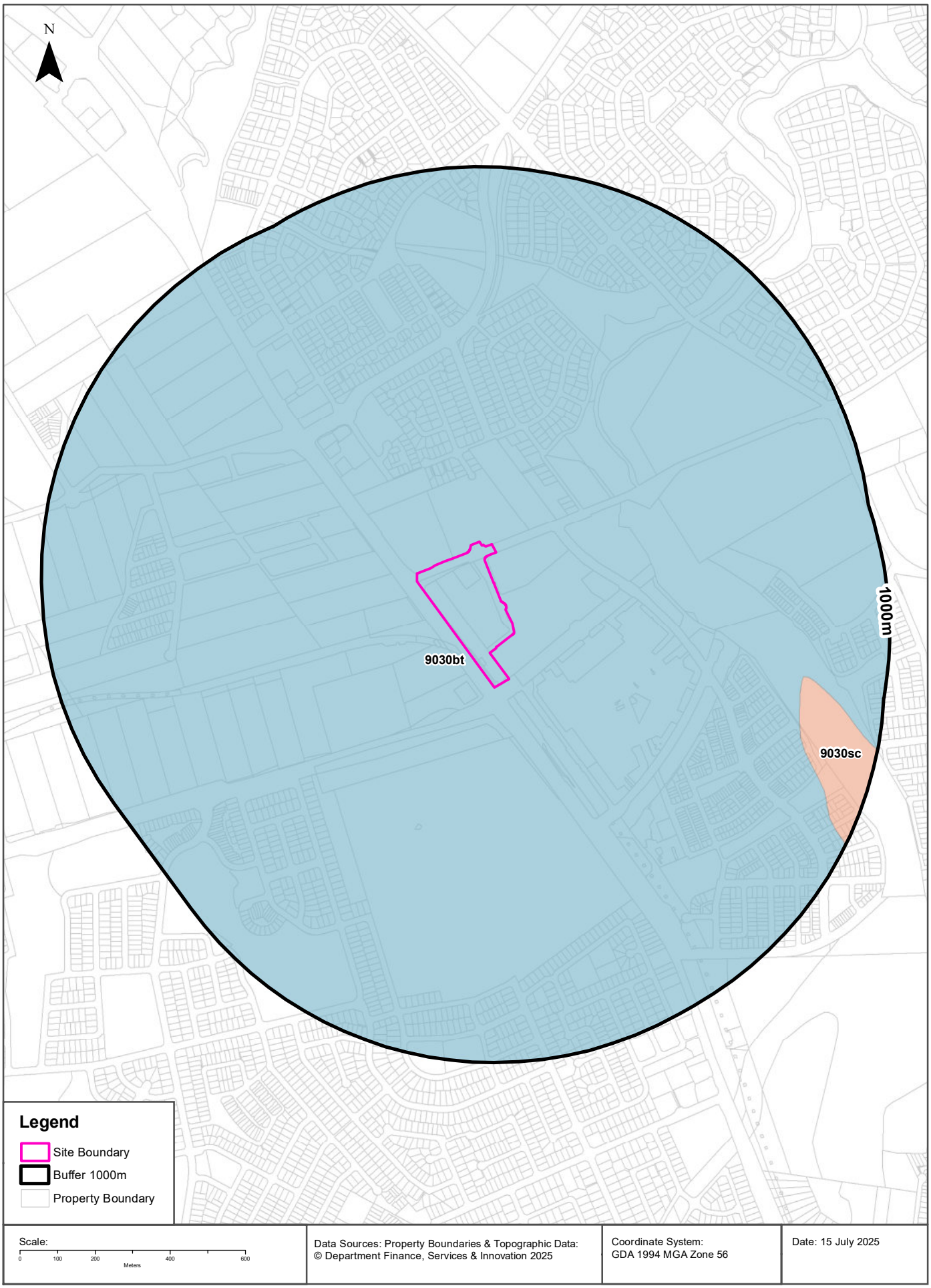
Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Pb12	Kurosol	Gently rolling to rounded hilly country with some steep slopes and broad valleys: chief soils are hard acidic red soils (Dr2.21) with hard neutral and acidic yellow mottled soils (Dy3.42 and Dy3.41) on lower slopes and in valleys. Associated are small areas of various soils including (Gn3.54) on some ridges, (Dr3.31) on some slopes; (Dr2.23) in saddles and some mid-slope positions, and some low- lying swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Small areas of other soils such as (Db1.2) are likely throughout.	0m	On-site

Atlas of Australian Soils Data Source: CSIRO
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Soil Landscapes of Central and Eastern NSW

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Soil Landscapes of Central and Eastern NSW

Soil Landscapes of Central and Eastern NSW within the dataset buffer:

Soil Code	Name	Distance	Direction
9030bt	Blacktown	0m	On-site
9030sc	South Creek	775m	East

Soil Landscapes of Central and Eastern NSW: NSW Department of Planning, Industry and Environment
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Acid Sulfate Soils

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Environmental Planning Instrument - Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description	EPI Name
N/A		

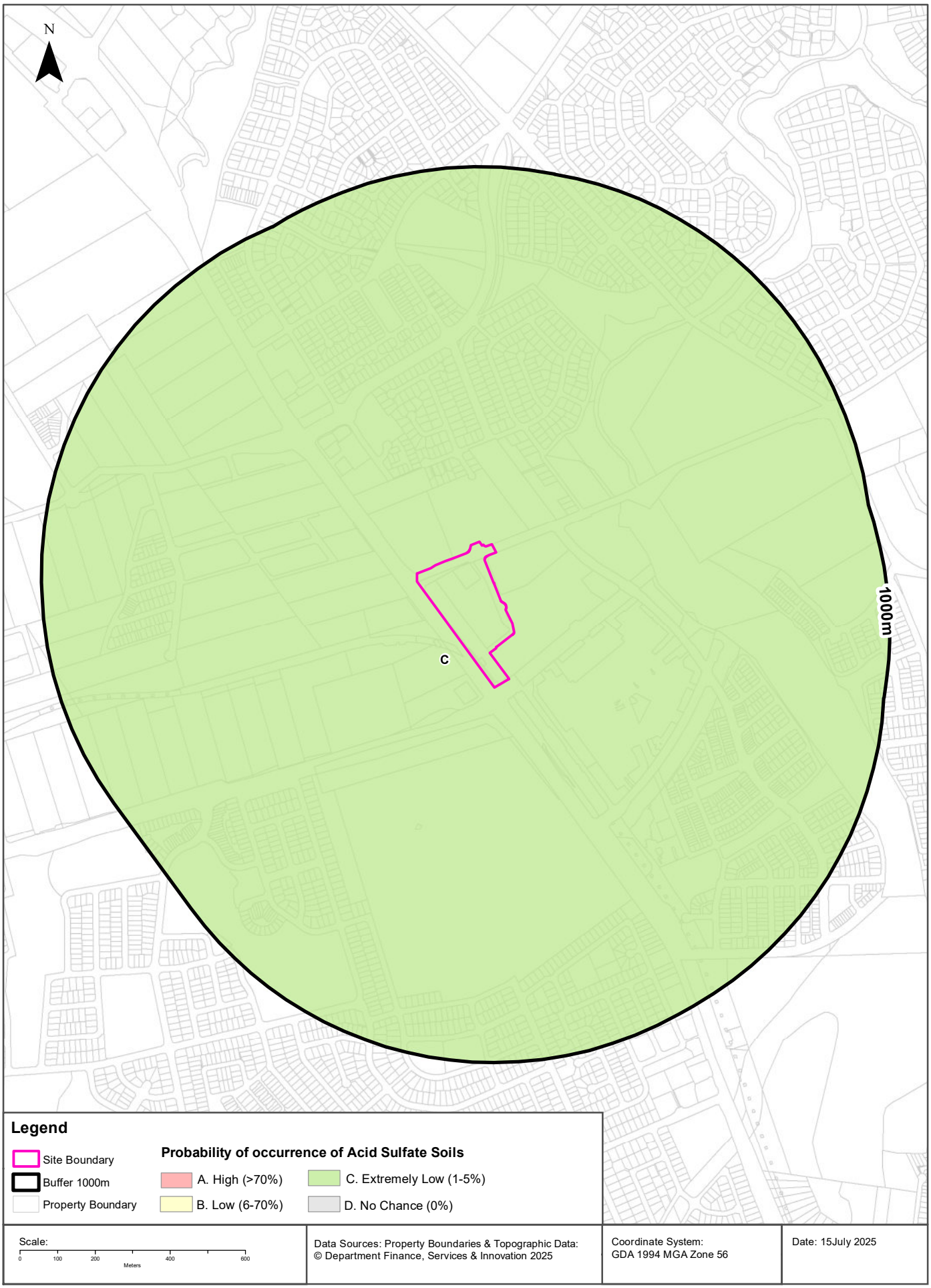
If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	EPI Name	Distance	Direction
N/A				

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Atlas of Australian Acid Sulfate Soils

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Acid Sulfate Soils

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance	Direction
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m	On-site

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO
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Dryland Salinity

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Dryland Salinity

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

Is there Dryland Salinity - National Assessment data within the dataset buffer?

Yes

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
High hazard or risk	High hazard or risk	High hazard or risk	6m	South East

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
274	MODERATE	Area of Moderate Salinity Potential	0m	On-site
255	LOW	Area of Very Low Salinity Potential	358m	North East
800	HIGH	Area of High Salinity Potential	422m	West
787	HIGH	Area of High Salinity Potential	736m	East
785	SALT	Area of Known Salinity	915m	South West

Dryland Salinity Potential of Western Sydney Data Source : NSW Office of Environment and Heritage
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Mining

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Mining Subsidence Districts

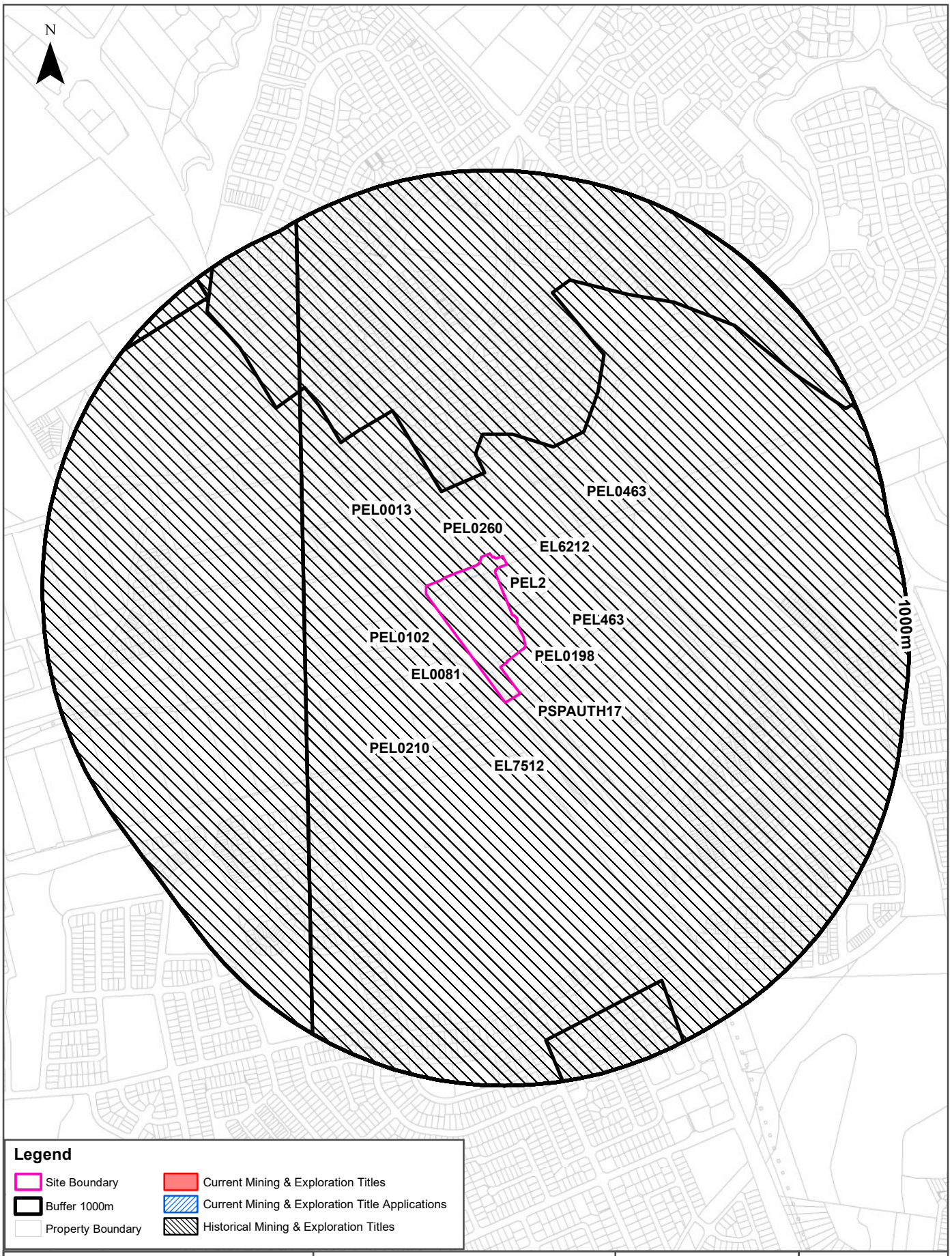
Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

Mining Subsidence District Data Source: © Land and Property Information (2016)
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Mining & Exploration Titles

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2025

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 July 2025

Mining

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Grant Date	Expiry Date	Last Renewed	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer								

Current Mining & Exploration Titles Data Source: Statewide Seamless Geology v2.4, NSW Department of Primary Industries and Regional Development

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Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

Application Ref	Applicant	Application Date	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer						

Current Mining & Exploration Title Applications Data Source: Statewide Seamless Geology v2.4, NSW Department of Primary Industries and Regional Development

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Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

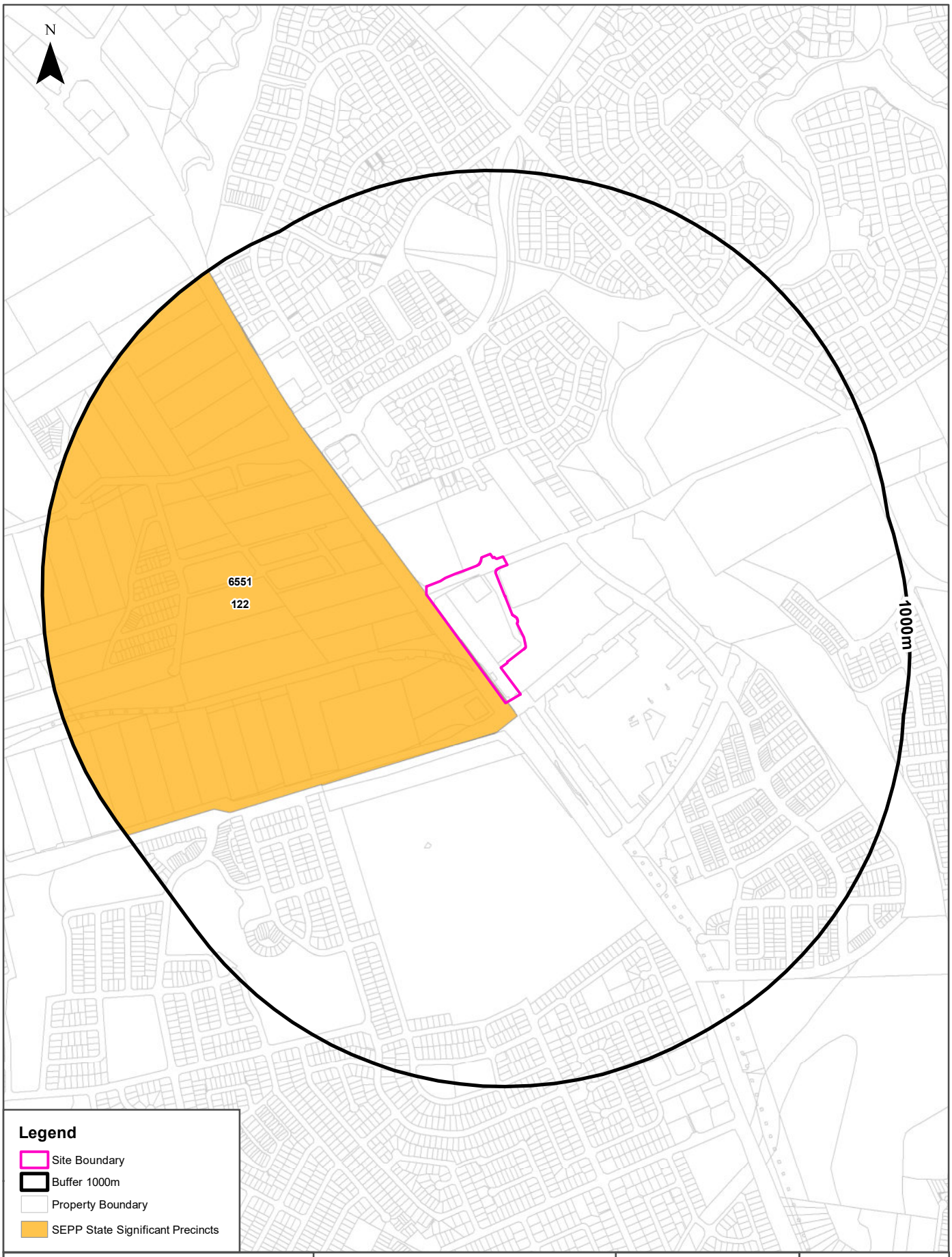
Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
EL0081	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	19670201	19680201	MINERALS		0m	On-site
PEL2	AGL UPSTREAM INVESTMENTS PTY LIMITED	20000120	20001108	MINERALS		0m	On-site
PEL0463	DART ENERGY (APOLLO) PTY LTD	20091010	20150603	PETROLEUM	Petroleum	0m	On-site
PEL0013	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0260	NORTH BULLI COLLIERIES PTY LTD, AGL PETROLEUM OPERATIONS PTY LTD, THE AUSTRALIAN GAS LIGHT CO.	19810909	19930803	PETROLEUM	Petroleum	0m	On-site
PSPAUTH17	MACQUARIE ENERGY PTY LTD	20070803	20080703	PETROLEUM	Petroleum	0m	On-site
PEL463	DART ENERGY (APOLLO) PTY LTD	20081022	20130227	MINERALS		0m	On-site
EL6212	HOT ROCK ENERGY PTY LTD,LONGREACH OIL LIMITED	20040304	20130303	MINERALS	Geothermal	0m	On-site
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	On-site
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0198	JOHN STREVENS (TERRIGAL) NL			PETROLEUM	Petroleum	0m	On-site
EL7512	GRADIENT ENERGY LIMITED	20100407	20110415	MINERALS	Geothermal	0m	On-site

Historical Mining & Exploration Titles Data Source: Statewide Seamless Geology v2.4, NSW Department of Primary Industries and Regional Development

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SEPP State Significant Precincts

Commercial & Windsor Roads, Rouse Hill, NSW 2155



State Environmental Planning Policy

Commercial & Windsor Roads, Rouse Hill, NSW 2155

State Significant Precincts

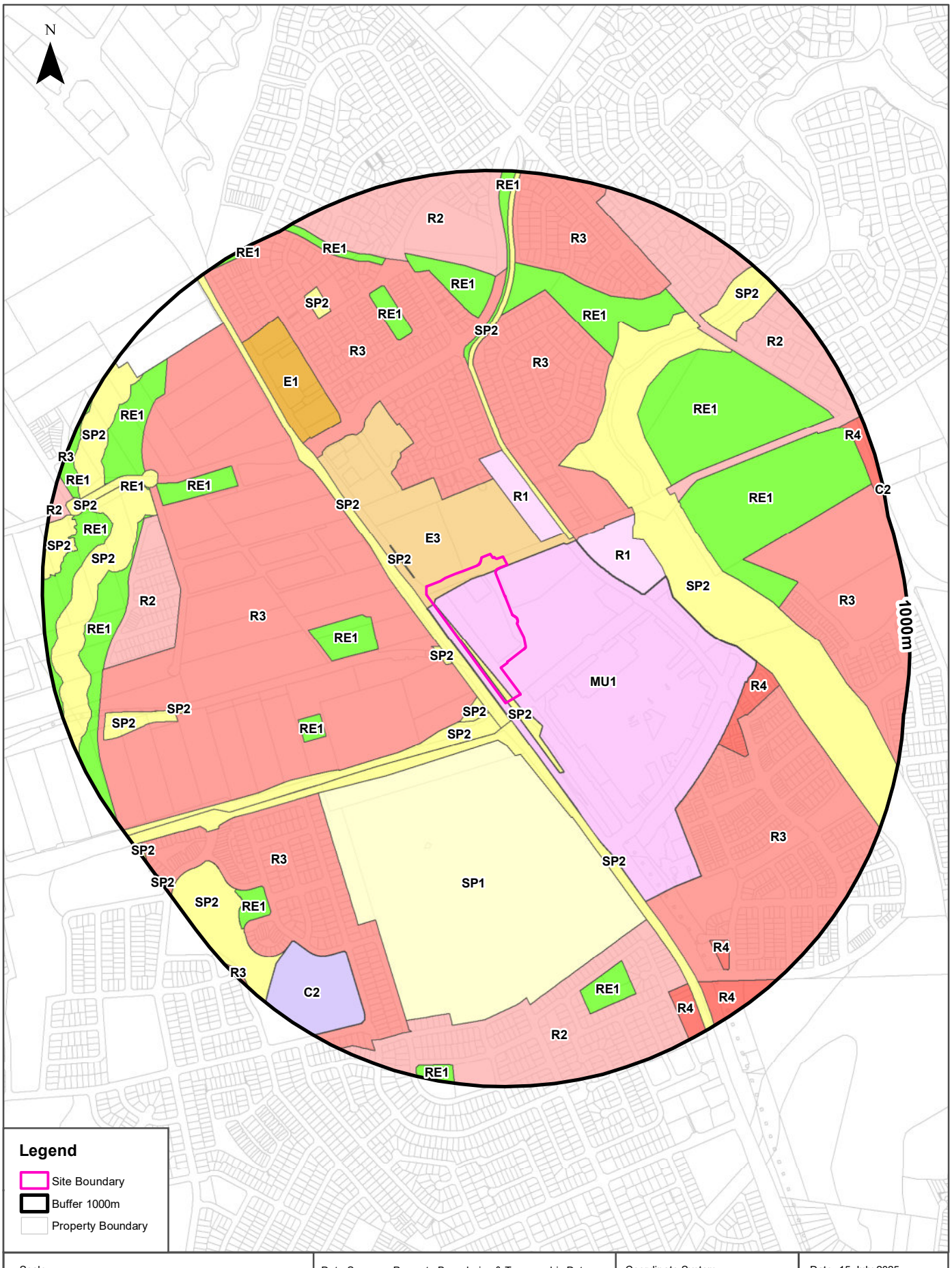
What SEPP State Significant Precincts exist within the dataset buffer?

Map Id	Precinct	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
122	Area 20 Precinct Plan	State Environmental Planning Policy (Precincts - Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		0m	On-site
6551		State Environmental Planning Policy (Precincts - Central River City) 2021	02/12/2021	01/03/2022	01/03/2022		0m	On-site

State Environment Planning Policy Data Source: NSW Crown Copyright - Planning & Environment
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EPI Planning Zones

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2025
Planning: NSW Crown Copyright - Planning & Environment

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 July 2025

Environmental Planning Instrument

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
MU1	Mixed Use		The Hills Local Environmental Plan 2019	16/12/2022	26/04/2023	27/11/2024	State Environmental Planning Policy Amendment (Land Use Zones) (No 2) 2022	0m	On-site
SP2	Infrastructure	Classified Road	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		0m	On-site
E3	Productivity Support		The Hills Local Environmental Plan 2019	16/12/2022	26/04/2023	27/11/2024	State Environmental Planning Policy Amendment (Land Use Zones) (No 2) 2022	0m	On-site
SP2	Infrastructure	Classified Road - Acquisition	State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		0m	On-site
SP2	Infrastructure	Classified Road	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		39m	North West
SP2	Infrastructure	Classified Road	Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	47m	South
SP2	Infrastructure	Local Drainage	State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		50m	South
SP2	Infrastructure	Classified Road	State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		50m	South West
R3	Medium Density Residential		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		50m	West
SP2	Infrastructure	Local Road	State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		51m	South West
SP1	Special Activities	Cemetery and Crematorium	Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	99m	South
R1	General Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		101m	North
RE1	Public Recreation		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		156m	West
SP2	Infrastructure	Public Transport Corridor	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		164m	North

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R3	Medium Density Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		177m	North
R3	Medium Density Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		180m	North
R1	General Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		189m	North East
SP2	Infrastructure	Stormwater Management System	The Hills Local Environmental Plan 2019	16/07/2021	16/07/2021	27/11/2024	Amendment No 20	278m	East
RE1	Public Recreation		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		408m	South West
R2	Low Density Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		459m	North East
RE1	Public Recreation		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		472m	North East
RE1	Public Recreation		The Hills Local Environmental Plan 2019	16/07/2021	16/07/2021	27/11/2024	Amendment No 20	475m	East
E1	Local Centre		The Hills Local Environmental Plan 2019	16/12/2022	26/04/2023	27/11/2024	State Environmental Planning Policy Amendment (Land Use Zones) (No 2) 2022	484m	North West
RE1	Public Recreation		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		493m	North
R3	Medium Density Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		501m	South East
R4	High Density Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		530m	East
R3	Medium Density Residential		Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	533m	South West
RE1	Public Recreation		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		557m	North West
RE1	Public Recreation		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		592m	North
R3	Medium Density Residential		The Hills Local Environmental Plan 2019	16/07/2021	16/07/2021	27/11/2024	Amendment No 20	605m	East
RE1	Public Recreation		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		606m	North
RE1	Public Recreation		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		618m	North
R2	Low Density Residential		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		640m	West
R2	Low Density Residential		Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	670m	South
SP2	Infrastructure	Local Road	State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		697m	West
SP2	Infrastructure	Local Drainage	State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		706m	West

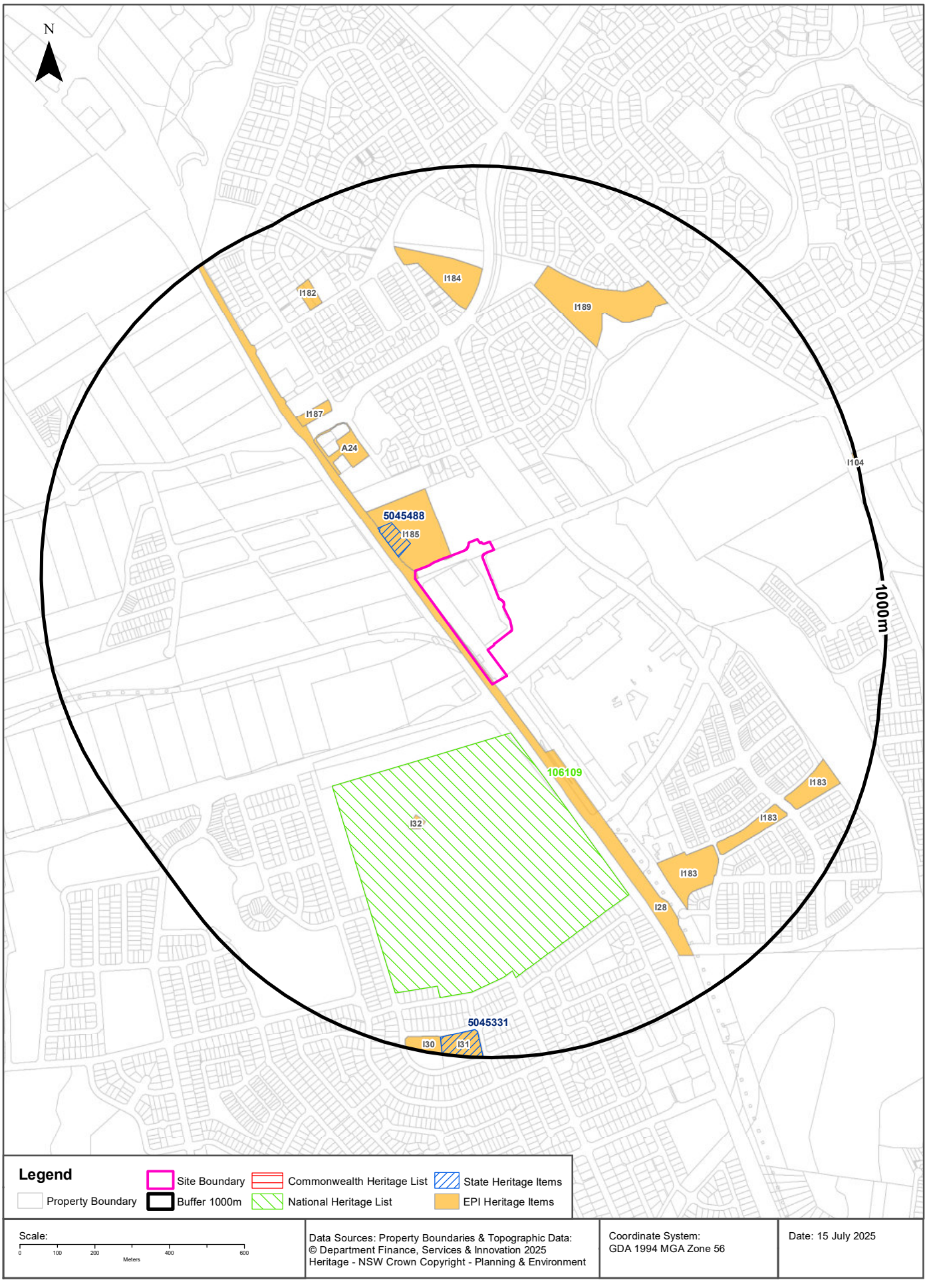
Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP2	Infrastructure	Local Drainage	State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		720m	West
R2	Low Density Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		724m	North
RE1	Public Recreation		Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	735m	South
R3	Medium Density Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		735m	North
RE1	Public Recreation		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		735m	West
SP2	Infrastructure	Local Road	State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		751m	West
SP2	Infrastructure	Cemetery	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		753m	North West
RE1	Public Recreation		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		763m	West
C2	Environmental Conservation		Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	770m	South West
RE1	Public Recreation		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		791m	North West
RE1	Public Recreation		Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	793m	South West
RE1	Public Recreation		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		804m	North
SP2	Infrastructure	Stormwater Management System	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		807m	North East
R4	High Density Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		807m	South East
RE1	Public Recreation		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		833m	West
SP2	Infrastructure	Drainage	Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	854m	South West
R4	High Density Residential		Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	863m	South East

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP2	Infrastructure	Local Drainage	State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		873m	North West
R4	High Density Residential		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		879m	South East
SP2	Infrastructure	Local Drainage	State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		914m	West
R4	High Density Residential		The Hills Local Environmental Plan 2019	16/07/2021	16/07/2021	27/11/2024	Amendment No 20	927m	North East
RE1	Public Recreation		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		930m	West
R2	Low Density Residential		State Environmental Planning Policy (Precincts—Central River City) 2021	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	945m	West
RE1	Public Recreation		Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	954m	South
SP2	Infrastructure	Drainage	Blacktown Local Environmental Plan 2015	23/05/2025	23/05/2025	23/05/2025	State Environmental Planning Policy Amendment (Riverstone East Stage 3 Precinct) 2025	981m	South West
RE1	Public Recreation		The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	27/11/2024		984m	North West
R3	Medium Density Residential		State Environmental Planning Policy (Precincts—Central River City) 2021	02/12/2021	01/03/2022	23/05/2025		995m	West
C2	Environmental Conservation		The Hills Local Environmental Plan 2019	05/11/2021	01/12/2021	27/11/2024	Standard Instrument (Local Environmental Plans) Amendment (Land Use Zones) Order 2021	998m	East

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Heritage Items

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Heritage

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Commonwealth Heritage List

What are the Commonwealth Heritage List Items located within the dataset buffer?

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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National Heritage List

What are the National Heritage List Items located within the dataset buffer?
Note. Please click on Place Id to activate a hyperlink to online website.

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
106109	Vinegar Hill	712 Windsor Rd, Kellyville NSW	1/14/005/0014	Historic	Indicative place		138m	South

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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State Heritage Register - Curtilages

What are the State Heritage Register Items located within the dataset buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
5045488	Royal Oak Inn (Former)	Rouse Hill	THE HILLS SHIRE	13/07/2012	00698	2554	57m	North West
5045331	Merriville House & Gardens	Vinegar Hill Road, Kellyville Ridge	BLACKTOWN	02/04/1999	00091	302	925m	South

Heritage Data Source: NSW Crown Copyright - Office of Environment & Heritage
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Environmental Planning Instrument - Heritage

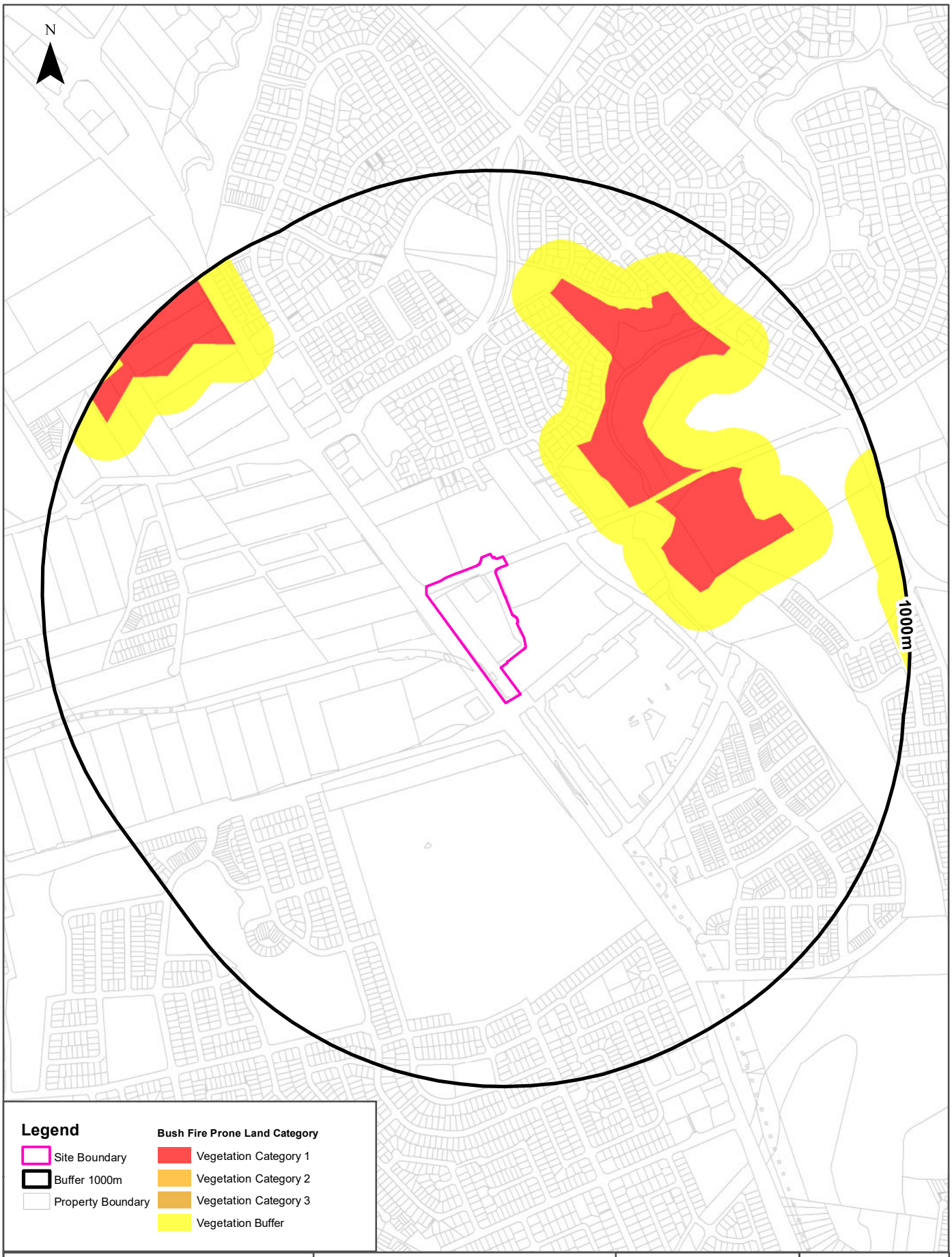
What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I185	Royal Oak Inn	Item - General	State	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	16/07/2021	0m	On-site
I28	Windsor Road from Baulkham Hills to Box Hill	Item - General	Local	The Hills Local Environmental Plan 2019	16/07/2021	16/07/2021	16/07/2021	0m	On-site
A24	Queens Arms Inn site	Item - Archaeological	Local	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	16/07/2021	323m	North West
I32	PlaceBattle of Vinegar Hill	Item - General	Local	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	07/07/2015	405m	South
I187	Christchurch	Item - General	Local	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	16/07/2021	484m	North West
I189	Private Burial Ground	Item - General	Local	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	16/07/2021	592m	North East
I184	Aberdoon House	Item - General	Local	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	16/07/2021	618m	North
I183	Mungerie	Item - General	Local	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	16/07/2021	640m	South East
I183	Mungerie	Item - General	Local	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	16/07/2021	717m	South East
I182	Rouse Hill Cemetery	Item - General	Local	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	16/07/2021	753m	North West
I183	Mungerie	Item - General	Local	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	16/07/2021	809m	South East
I31	Merriville House and gardens	Item - General	State	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	07/07/2015	925m	South
I30	Merriville Rise Park	Item - General	Local	Blacktown Local Environmental Plan 2015	26/05/2015	07/07/2015	07/07/2015	954m	South
I104	Lintbrae House	Item - General	Local	The Hills Local Environmental Plan 2019	06/12/2019	06/12/2019	16/07/2021	990m	East

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Natural Hazards - Bush Fire Prone Land

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Data Sources: Bush Fire Prone Land: © NSW Rural Fire Service 2025. Property Boundaries: © Department Finance, Services & Innovation 2025

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 July 2025

Natural Hazards

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Bush Fire Prone Land

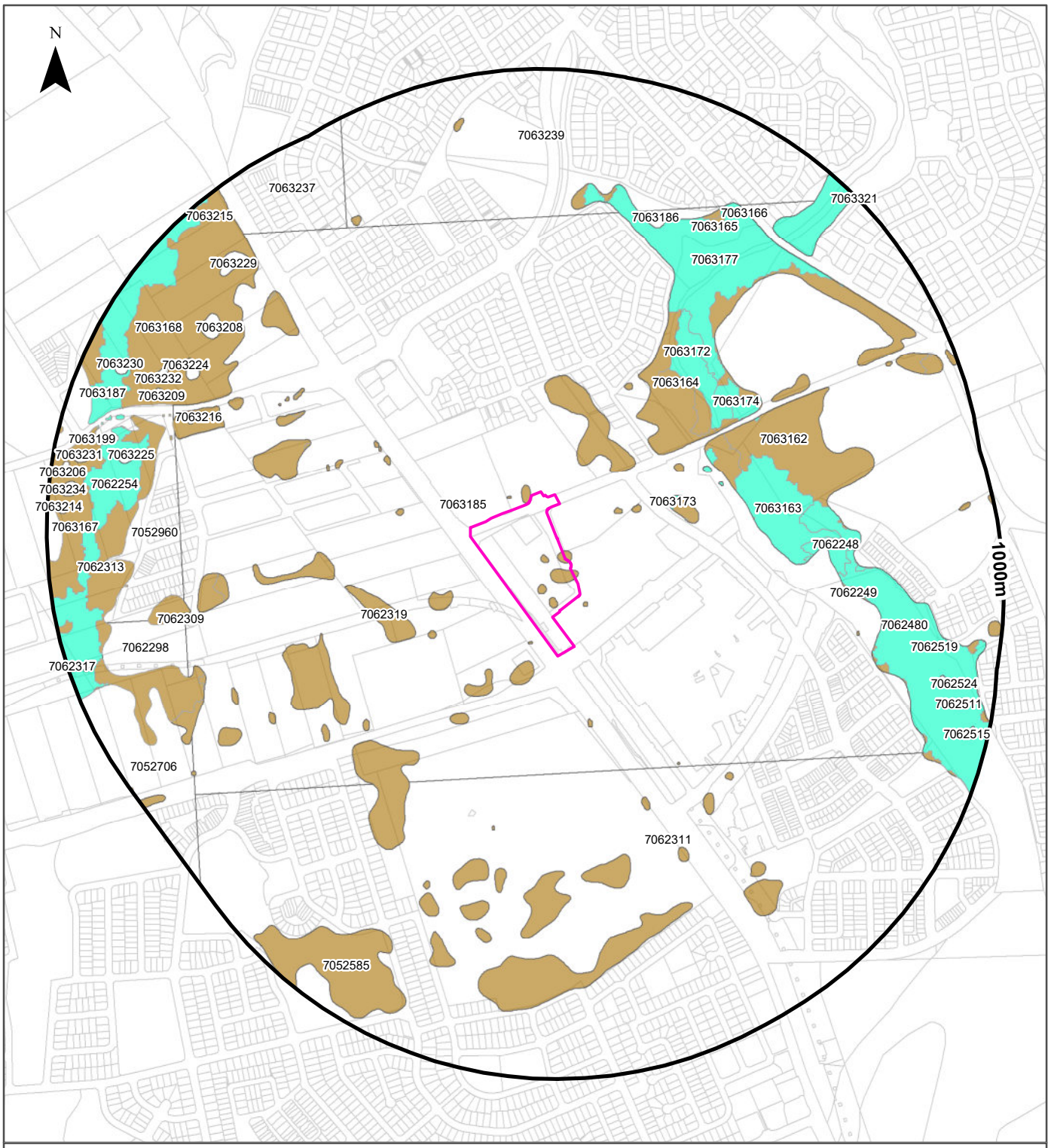
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	229m	North East
Vegetation Category 1	329m	North East
Vegetation Category 3	995m	North West

NSW Bush Fire Prone Land - © NSW Rural Fire Service under Creative Commons 4.0 International Licence

Ecological Constraints - Vegetation & Ramsar Wetlands

Commercial & Windsor Roads, Rouse Hill, NSW 2155



- Site Boundary
- ReportBuffer
- Property Boundary
- Ramsar Wetland

Native Vegetation

- Alpine Complex
- Arid Shrublands (Acacia sub-formation)
- Arid Shrublands (Chenopod sub-formation)
- Dry Sclerophyll Forests (Shrub/grass sub-formation)
- Dry Sclerophyll Forests (Shrubby sub-formation)
- Forested Wetlands
- Freshwater Wetlands
- Grasslands
- Grassy Woodlands
- Heathlands
- Rainforests
- Saline Wetlands
- Semi-arid Woodlands (Grassy sub-formation)
- Semi-arid Woodlands (Shrubby sub-formation)
- Wet Sclerophyll Forests (Grassy sub-formation)
- Wet Sclerophyll Forests (Shrubby sub-formation)
- Non vegetated
- Unattributed
- Not classified
- Other

Scale: 0 100 200 400 600 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2025

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 July 2025

Ecological Constraints

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
7052585	Grassy Woodlands	(Grassy Woodlands) Cumberland Shale Plains Woodland	Coastal Valley Grassy Woodlands	0m	On-site
7063185	Not classified	(Not classified) Not classified	Not classified	0m	On-site
7063173	Forested Wetlands	(Forested Wetlands) Cumberland Red Gum Riverflat Forest	Coastal Floodplain Wetlands	251m	North East
7062319	Not classified	(Not classified) Not classified	Not classified	267m	West
7062311	Not classified	(Not classified) Not classified	Not classified	277m	South
7063164	Grassy Woodlands	(Grassy Woodlands) Cumberland Shale-Sandstone Ironbark Forest	Coastal Valley Grassy Woodlands	351m	North East
7063168	Grassy Woodlands	(Grassy Woodlands) Cumberland Shale-Sandstone Ironbark Forest	Coastal Valley Grassy Woodlands	367m	West
7063172	Forested Wetlands	(Forested Wetlands) Cumberland Red Gum Riverflat Forest	Coastal Floodplain Wetlands	399m	North East
7063162	Grassy Woodlands	(Grassy Woodlands) Cumberland Shale-Sandstone Ironbark Forest	Coastal Valley Grassy Woodlands	404m	North East
7063163	Forested Wetlands	(Forested Wetlands) Cumberland Red Gum Riverflat Forest	Coastal Floodplain Wetlands	415m	East
7063174	Forested Wetlands	(Forested Wetlands) Sydney Hinterland Red Gum Riverflat Forest	Coastal Floodplain Wetlands	440m	North East
7063177	Forested Wetlands	(Forested Wetlands) Sydney Hinterland Red Gum Riverflat Forest	Coastal Floodplain Wetlands	461m	North East
7062249	Grassy Woodlands	(Grassy Woodlands) Cumberland Shale-Sandstone Ironbark Forest	Coastal Valley Grassy Woodlands	517m	East
7062248	Forested Wetlands	(Forested Wetlands) Sydney Hinterland Red Gum Riverflat Forest	Coastal Floodplain Wetlands	532m	East
7062480	Forested Wetlands	(Forested Wetlands) Cumberland Red Gum Riverflat Forest	Coastal Floodplain Wetlands	610m	East
7063239	Not classified	(Not classified) Not classified	Not classified	650m	North
7063186	Not classified	(Not classified) Not classified	Not classified	674m	North
7052960	Not classified	(Not classified) Not classified	Not classified	684m	West
7063216	Not classified	(Not classified) Not classified	Not classified	687m	North West
7062309	Not classified	(Not classified) Not classified	Not classified	699m	West
7063204	Not classified	(Not classified) Not classified	Not classified	701m	North West
7062298	Not classified	(Not classified) Not classified	Not classified	702m	West
7063165	Grassy Woodlands	(Grassy Woodlands) Cumberland Shale-Sandstone Ironbark Forest	Coastal Valley Grassy Woodlands	731m	North East
7063224	Not classified	(Not classified) Not classified	Not classified	734m	North West
7063208	Not classified	(Not classified) Not classified	Not classified	750m	North West
7063237	Not classified	(Not classified) Not classified	Not classified	766m	North West
7062254	Forested Wetlands	(Forested Wetlands) Cumberland Red Gum Riverflat Forest	Coastal Floodplain Wetlands	782m	West
7063209	Not classified	(Not classified) Not classified	Not classified	791m	North West
7063166	Grassy Woodlands	(Grassy Woodlands) Cumberland Shale-Sandstone Ironbark Forest	Coastal Valley Grassy Woodlands	798m	North East
7063232	Not classified	(Not classified) Not classified	Not classified	801m	North West

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
7052706	Not classified	(Not classified) Not classified	Not classified	810m	South West
7063225	Not classified	(Not classified) Not classified	Not classified	812m	West
7063229	Not classified	(Not classified) Not classified	Not classified	813m	North West
7062519	Not classified	(Not classified) Not classified	Not classified	844m	East
7062520	Not classified	(Not classified) Not classified	Not classified	866m	East
7062313	Not classified	(Not classified) Not classified	Not classified	870m	West
7063167	Grassy Woodlands	(Grassy Woodlands) Cumberland Shale-Sandstone Ironbark Forest	Coastal Valley Grassy Woodlands	876m	West
7062354	Grassy Woodlands	(Grassy Woodlands) Cumberland Shale-Sandstone Ironbark Forest	Coastal Valley Grassy Woodlands	886m	East
7062524	Not classified	(Not classified) Not classified	Not classified	888m	East
7063230	Not classified	(Not classified) Not classified	Not classified	890m	North West
7063187	Not classified	(Not classified) Not classified	Not classified	902m	West
7062511	Not classified	(Not classified) Not classified	Not classified	907m	East
7063199	Not classified	(Not classified) Not classified	Not classified	907m	West
7063231	Not classified	(Not classified) Not classified	Not classified	917m	West
7063234	Not classified	(Not classified) Not classified	Not classified	928m	West
7062315	Not classified	(Not classified) Not classified	Not classified	944m	West
7062515	Not classified	(Not classified) Not classified	Not classified	950m	East
7063214	Not classified	(Not classified) Not classified	Not classified	953m	West
7063215	Not classified	(Not classified) Not classified	Not classified	956m	North West
7063206	Not classified	(Not classified) Not classified	Not classified	957m	West
7062317	Not classified	(Not classified) Not classified	Not classified	974m	West
7063321	Not classified	(Not classified) Not classified	Not classified	992m	North East

Native Vegetation Type Map : NSW Department of Planning and Environment 2022
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Ramsar Wetlands

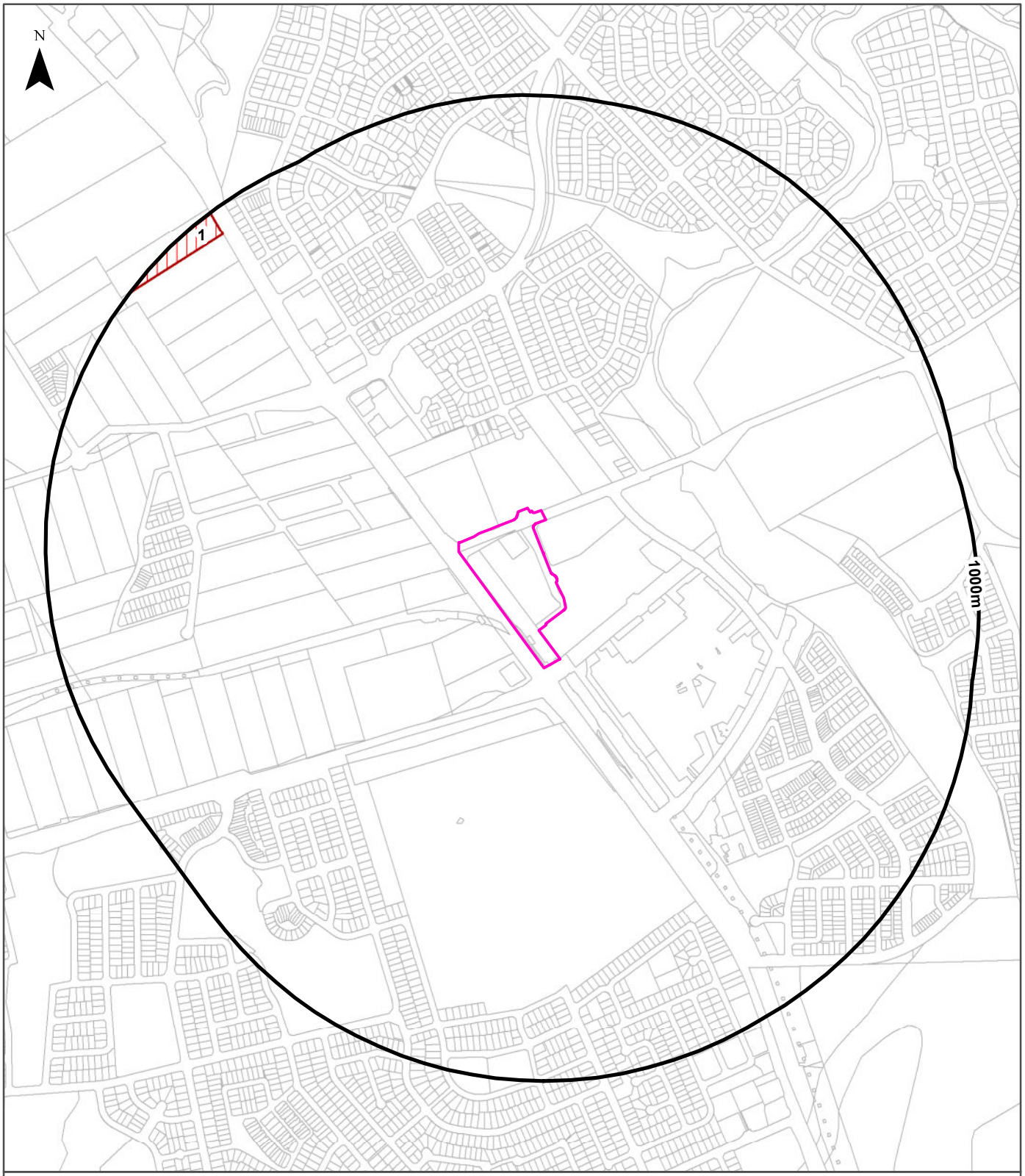
What Ramsar Wetland areas exist within the dataset buffer?

Map ID	Ramsar Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

Ramsar Wetlands Data Source: © Commonwealth of Australia - Department of Agriculture, Water and the Environment

Ecological Constraints - Protected Areas

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Legend

IUCN category

- Site Boundary
- Buffer 1000m
- Property Boundary
- Strict Nature Reserve
- Wilderness Area
- National Park
- Natural Monument or Feature
- Habitat/Species Management Area
- Protected Landscape/Seascape
- Protected area sustainable use of natural resources
- Uncategorised Protected Area

Scale: 0 100 200 400 600 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2025

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 July 2025

Ecological Constraints

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Collaborative Australian Protected Areas Database - Terrestrial

Protected areas in terrestrial environments identified by the CAPAD within the dataset buffer:

Map ID	Area Name	Area Details	Management Category	Authority	Jurisdiction	Dist	Dir
1	Rouse Hill	Regional Park	Protected Landscape/Seascape	NSW Department of Planning and Environment	State	941m	North West

Collaborative Australian Protected Areas Database - Marine

Protected areas in marine environments identified by the CAPAD within the dataset buffer:

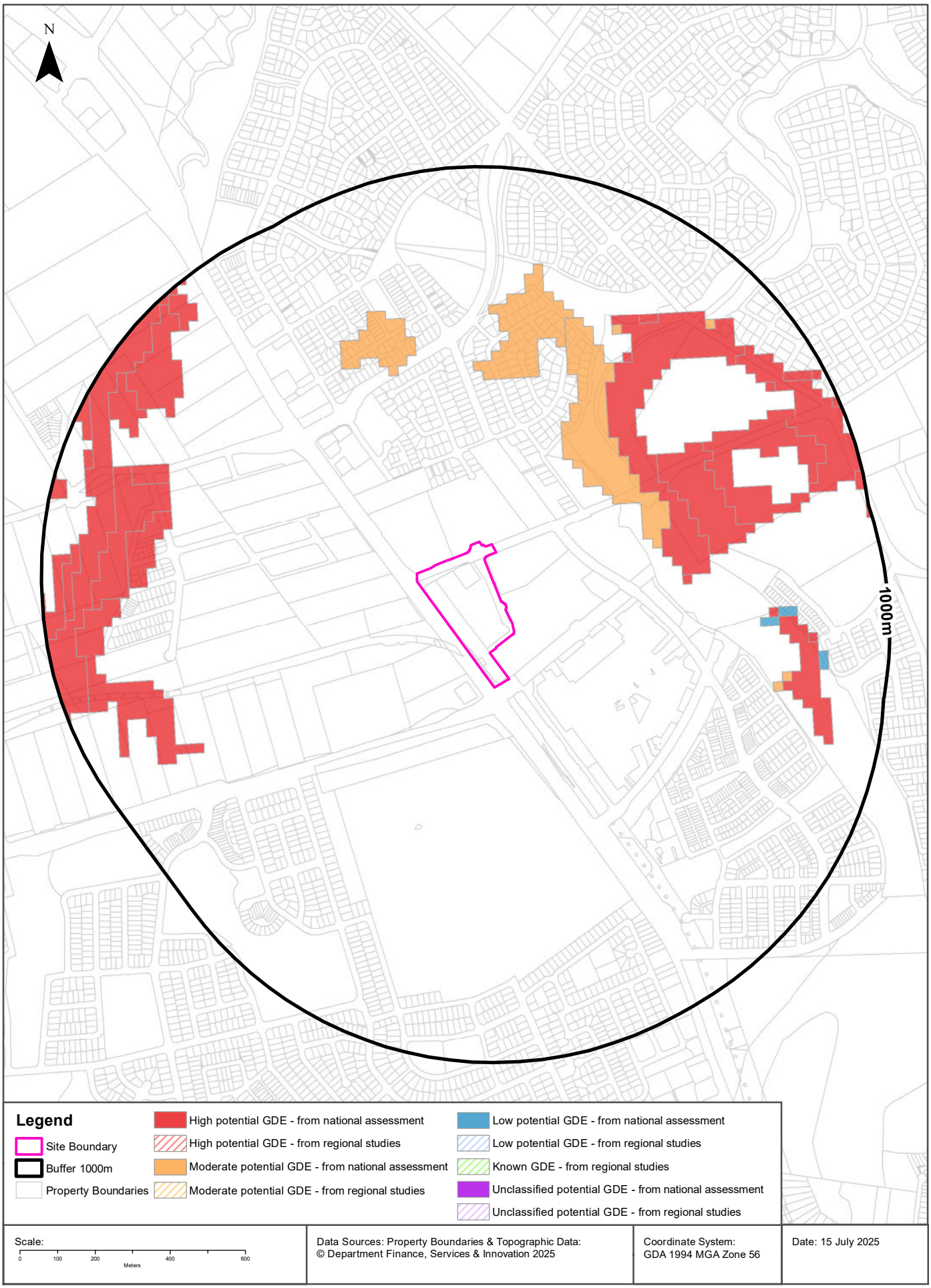
Map ID	Area Name	Area Details	Management Category	Authority	Jurisdiction	Dist	Dir
N/A	No records in buffer						

Source: Collaborative Australian Protected Areas Database (CAPAD) 2022

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Ecological Constraints - Groundwater Dependent Ecosystems Atlas

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Ecological Constraints

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Groundwater Dependent Ecosystems Atlas

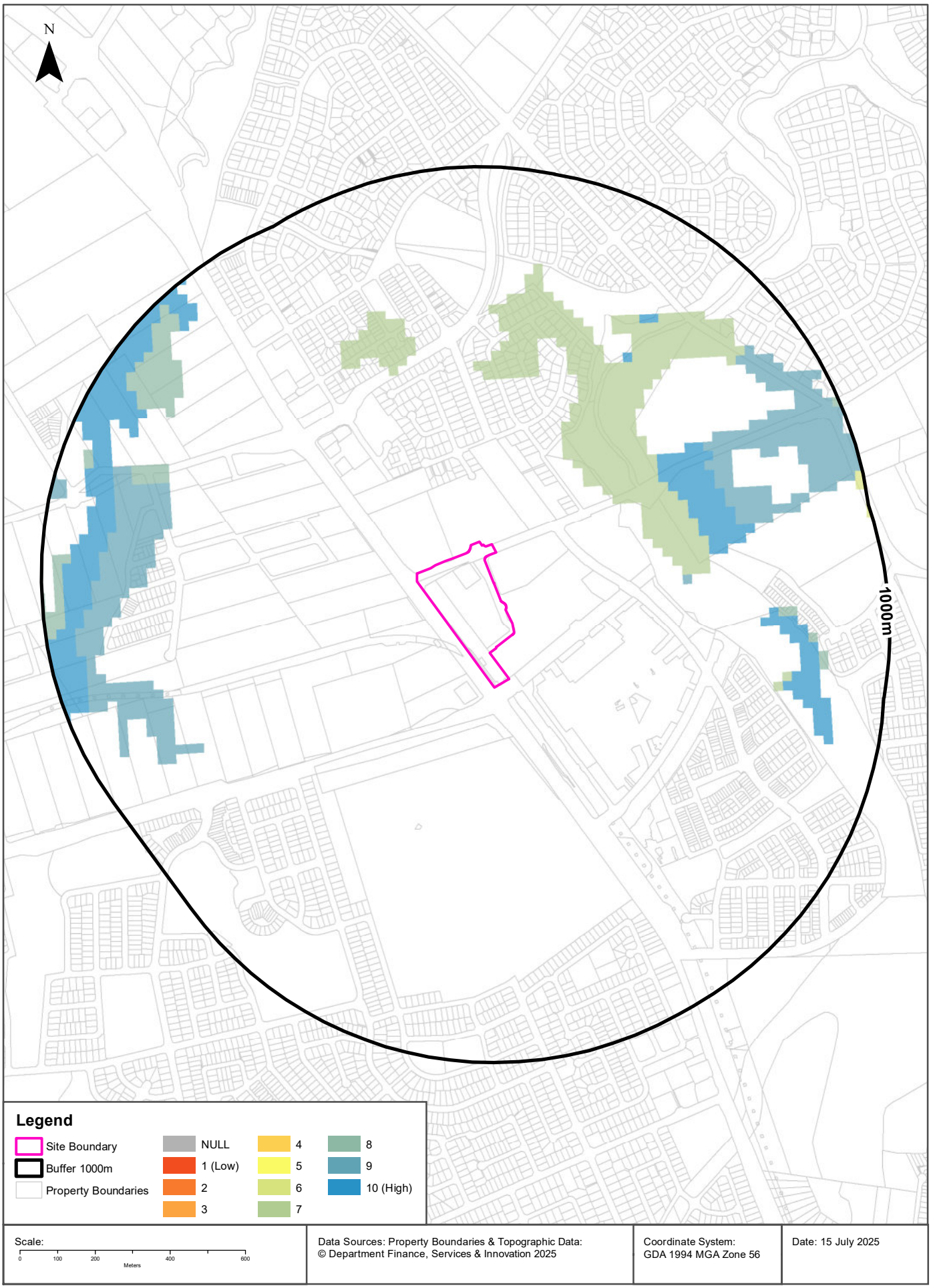
Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	Moderate potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	287m	North East
Terrestrial	High potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	410m	North East
Terrestrial	Low potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	654m	East

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology

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Ecological Constraints - Inflow Dependent Ecosystems Likelihood

Commercial & Windsor Roads, Rouse Hill, NSW 2155



Ecological Constraints

Commercial & Windsor Roads, Rouse Hill, NSW 2155

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	7	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	287m	North East
Terrestrial	9	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	465m	East
Terrestrial	10	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	470m	North East
Terrestrial	8	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	702m	West
Terrestrial	6	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	972m	East

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

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Ecological Constraints

Commercial & Windsor Roads, Rouse Hill, NSW 2155

NSW BioNet Species Sightings

Species sightings from the NSW BioNet Repository that have either a state or federal conservation status, or a sensitivity status, and are within 10 km of the site:
Note: This data does not include NSW Category 1 sensitive species.

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Heleioporus australiacus	Giant Burrowing Frog	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Not Sensitive	Endangered	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Category 2	Critically Endangered	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna pacifica	Wedge-tailed Shearwater	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Not Sensitive	Endangered	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris alba	Sanderling	Not Sensitive	Vulnerable	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Not Sensitive	Critically Endangered	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Category 3	Endangered	Endangered	
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)	Category 2	Vulnerable	Not Listed	
Animalia	Aves	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Category 2	Vulnerable	Vulnerable	
Animalia	Aves	Circus assimilis	Spotted Harrier	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Cuculus optatus	Oriental Cuckoo	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Not Sensitive	Vulnerable	Not Listed	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;JAMBA
Animalia	Aves	Grantiella picta	Painted Honeyeater	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hirundo rustica	Barn Swallow	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Irediparra gallinacea	Comb-crested Jacana	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Not Sensitive	Endangered	Critically Endangered	
Animalia	Aves	Lophochroa leadbeateri	Pink Cockatoo	Category 2	Vulnerable	Endangered	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Melanodryas cucullata cucullata	South-eastern Hooded Robin	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Pachycephala olivacea	Olive Whistler	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Parvipsitta pusilla	Little Lorikeet	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Petroica rodinogaster	Pink Robin	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Category 3	Vulnerable	Vulnerable	
Animalia	Aves	Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ptilinopus magnificus	Wompoo Fruit-Dove	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Pycnoptilus floccosus	Pilotbird	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Pyrrholaemus sagittatus	Speckled Warbler	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Rhipidura fuliginosa	New Zealand Fantail (Lord Howe Is. subsp.)	Not Sensitive	Extinct	Extinct	
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Not Sensitive	Endangered	Endangered	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Thalassarche melanophris	Black-browed Albatross	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Thalasseus bergii	Crested Tern	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Thinornis cucullatus cucullatus	Eastern Hooded Dotterel	Not Sensitive	Critically Endangered	Vulnerable	
Animalia	Aves	Tringa glareola	Wood Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Sensitive	Endangered	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Category 3	Vulnerable	Not Listed	
Animalia	Gastropoda	Meridolum corneovirens	Cumberland Plain Land Snail	Not Sensitive	Endangered	Not Listed	
Animalia	Gastropoda	Pommerhelix duralensis	Dural Land Snail	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Not Sensitive	Vulnerable	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Isoodon obesulus obesulus	Southern Brown Bandicoot (eastern)	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Notomys cervinus	Fawn Hopping-mouse	Not Sensitive	Extinct	Not Listed	
Animalia	Mammalia	Nyctophilus bifax	Eastern Long-eared Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Petauroides volans	Southern Greater Glider	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Vespadelus troughtoni	Eastern Cave Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	Aspidites ramsayi	Woma	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Not Sensitive	Endangered	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Not Sensitive	Vulnerable	Vulnerable	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Reptilia	Cyclodomorphus melanops elongatus	Mallee Slender Blue-tongue Lizard	Not Sensitive	Endangered	Not Listed	
Animalia	Reptilia	Diplodactylus platyurus	Eastern Fat-tailed Gecko	Not Sensitive	Endangered	Not Listed	
Animalia	Reptilia	Eulamprus kosciuskoi	Alpine Water Skink	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Reptilia	Hemiaspis damelii	Grey Snake	Not Sensitive	Endangered	Endangered	
Animalia	Reptilia	Tiliqua occipitalis	Western Blue-tongued Lizard	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	Uvidicolus sphyrurus	Border Thick-tailed Gecko	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Not Sensitive	Endangered	Vulnerable	
Plantae	Flora	Acacia pubescens	Downy Wattle	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Category 3	Vulnerable	Not Listed	
Plantae	Flora	Cryptostylis hunteriana	Leafless Tongue Orchid	Category 2	Vulnerable	Vulnerable	
Plantae	Flora	Darwinia biflora		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Dillwynia tenuifolia		Not Sensitive	Endangered Population, Vulnerable	Not Listed	
Plantae	Flora	Dillwynia tenuifolia		Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Doryanthes palmeri	Giant Spear Lily	Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Epacris purpurascens var. purpurascens		Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Eucalyptus cryptica		Not Sensitive	Critically Endangered	Critically Endangered	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Not Sensitive	Endangered	Vulnerable	
Plantae	Flora	Grevillea juniperina subsp. juniperina	Juniper-leaved Grevillea	Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Hibbertia puberula		Not Sensitive	Endangered	Not Listed	
Plantae	Flora	Hibbertia spanantha	Julian's Hibbertia	Category 2	Critically Endangered	Critically Endangered	
Plantae	Flora	Hibbertia superans		Not Sensitive	Endangered	Not Listed	
Plantae	Flora	Isotoma fluviatilis subsp. fluviatilis		Category 3	Not Listed	Extinct	
Plantae	Flora	Lasiopetalum joyceae		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Leucopogon fletcheri subsp. fletcheri		Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Sensitive	Not Listed	Vulnerable	
Plantae	Flora	Macadamia tetraphylla	Rough-shelled Bush Nut	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Marsdenia viridiflora subsp. viridiflora	Native Pear	Not Sensitive	Endangered Population	Not Listed	
Plantae	Flora	Melaleuca deanei	Deane's Paperbark	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Micromyrtus minutiflora		Not Sensitive	Endangered	Vulnerable	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Category 3	Endangered	Endangered	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Persoonia mollis subsp. maxima		Not Sensitive	Endangered	Endangered	
Plantae	Flora	Pilularia novae-hollandiae	Austral Pillwort	Category 3	Endangered	Not Listed	
Plantae	Flora	Pimelea curviflora var. curviflora		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Pimelea spicata	Spiked Rice-flower	Not Sensitive	Endangered	Endangered	
Plantae	Flora	Pomaderris brunnea	Brown Pomaderris	Not Sensitive	Endangered	Vulnerable	
Plantae	Flora	Pterostylis saxicola	Sydney Plains Greenhood	Category 2	Endangered	Endangered	
Plantae	Flora	Pultenaea parviflora		Not Sensitive	Endangered	Vulnerable	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Tetratheca glandulosa		Not Sensitive	Vulnerable	Not Listed	

Source: NSW BioNet Species Sightings

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Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a code is given under the field heading “LC” or “LocConf”. These codes lookup to the following location confidences:

LC Code	Location Confidence
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced to an approximate or general area
Road Match	Georeferenced to a road or rail corridor
Road Intersection	Georeferenced to a road intersection
Buffered Point	A point feature buffered to x metres
Adjacent Match	Land adjacent to a georeferenced feature
Network of Features	Georeferenced to a network of features
Suburb Match	Georeferenced to a suburb boundary
As Supplied	Spatial data supplied by provider

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Section 10.7 Certificates

THE HILLS SHIRE COUNCIL
3 Columbia Court, Norwest NSW 2153
PO Box 7064, Norwest 2153
ABN 25 034 494 656 | DX 9966 Norwest

PLANNING CERTIFICATE UNDER SECTION 10.7(2) & (5)

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 AS AMENDED.

Certificate Number:	**80651**
Reference:	E37757B:285207
Issue Date:	15 July 2025
Receipt No:	7887764
Fee Paid:	$ 178.00

ADDRESS:	Future Hospital Site, Commercial Road, ROUSE HILL NSW 2155
DESCRIPTION:	Lot 311 DP 1274392

The land is zoned:

Zone MU1 Mixed Use

The following prescribed matters apply to the land to which this certificate relates:

The information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment Regulation 2021.

PLEASE NOTE: THIS CERTIFICATE IS AUTOMATICALLY GENERATED. IT MAY CONTAIN EXCESSIVE SPACES AND/OR BLANK PAGES.

THIS CERTIFICATE IS DIRECTED TO THE FOLLOWING MATTERS PRESCRIBED UNDER SECTION 10.7(2) OF THE ABOVE ACT.

1 Names of relevant planning instruments and development control plans

(1) The name of each environmental planning instrument and development control plan that applies to the carrying out of development on the land.

Local Environmental Plans

The Hills Local Environmental Plan 2019

State Environmental Planning Policies

SEPP (Biodiversity and Conservation) 2021 – including but not limited to
Chapter 2 Vegetation in non rural areas
Chapter 6 Water Catchments

SEPP (Resilience and Hazards) 2021 – including but not limited to

Chapter 3 Hazardous and offensive development
Chapter 4 Remediation of land

SEPP (Industry and Employment) 2021 – Including but not limited to
Chapter 3 Advertising and signage

SEPP No.65 - Design Quality Of Residential Apartment Development

SEPP (Precincts-Central River City) 2021 – Including but not limited to
Chapter 2 State significant precincts

SEPP (Resources and Energy) 2021 – including but not limited to
Chapter 2 Mining, petroleum production and extractive industries
Chapter 3 Extractive industries in Sydney area

SEPP (Transport and Infrastructure) 2021 – including but not limited to
Chapter 2 Infrastructure
Chapter 3 Educational establishments and childcare

SEPP (Exempt and Complying Development Codes) 2008

SEPP (Planning Systems) 2021 – including but not limited to
Chapter 2 State and regional development
Chapter 4 Concurrences and consents

SEPP (Primary Production) 2021 – including but not limited to
Chapter 2 Primary production and rural development
SEPP (Precincts – Western Parkland City) 2021 – Including but not limited to

Chapter 4 Western Sydney Aerotropolis

SEPP (Housing) 2021

SEPP (Sustainable Buildings) 2022

Development Control Plans

The Hills Development Control Plan 2012

Note: the land is within The Hills Development Control Plan 2012 Part C map sheet. Refer Council's website www.thehills.nsw.gov.au to view the map sheet.Note: the land is within The Hills Development Control Plan 2012 Part D map sheet. Refer Council's website www.thehills.nsw.gov.au to view the map sheet.

(2) The name of each proposed environmental planning instrument and draft development control plan, which is or has been subject to community consultation or public exhibition under the Act, that will apply to the carrying out of development on the land.

Proposed Local Environmental Plans

No Proposed Local Environmental Plans apply to this land.

Proposed State Environmental Planning Policies

No Proposed State Environmental Planning Policies apply to the land.

Listing of proposed State Environmental Planning Instruments is dependent on advice being provided to Council of community consultation or public exhibition by the relevant public authorities. Refer Plans and Policies | Planning Portal - Department of Planning and Environment (nsw.gov.au)

Proposed Development Control Plans

No Proposed Development Control Plans apply to the land.

(3) Subsection (2) does not apply in relation to a proposed environmental planning instrument or draft development control plan if—
(a) it has been more than 3 years since the end of the public exhibition period for the proposed instrument or draft plan, or
(b) for a proposed environmental planning instrument—the Planning Secretary has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved.

(4) In this section—
proposed environmental planning instrument means a draft environmental planning instrument and includes a planning proposal for a local environmental plan.

2 Zoning and land use under relevant planning instruments

The following matters for each environmental planning instrument or draft environmental planning instrument that includes the land in a zone, however described—
(a) the identity of the zone, whether by reference to—
(i) a name, such as "Residential Zone" or "Heritage Area", or

(ii) a number, such as "Zone No 2 (a)",

The Hills Local Environmental Plan 2019 identifies the land to be:

Zone MU1 Mixed Use

(b) the purposes for which development in the zone—
(i) may be carried out without development consent, and
(ii) may not be carried out except with development consent, and
(iii) is prohibited,

Refer Attachment 2(b)

(c) whether additional permitted uses apply to the land,

YES

Refer Attachment 2(b)

(d) whether development standards applying to the land fix minimum land dimensions for the erection of a dwelling house on the land and, if so, the fixed minimum land dimensions,

The Hills Local Environmental Plan 2019?

NO

Any proposed amendments to The Hills Local Environmental Plan 2019?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 5 North Kellyville Precinct Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 5 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

(e) whether the land is in an area of outstanding biodiversity value under the *Biodiversity Conservation Act 2016*,

The Hills Local Environmental Plan 2019?

NO

Any proposed amendments to The Hills Local Environmental Plan 2019?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 5 North Kellyville Precinct Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 5 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

(f) whether the land is in a conservation area, however described,

The Hills Local Environmental Plan 2019?

NO

Any proposed amendments to The Hills Local Environmental Plan 2019?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 5 North Kellyville Precinct Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 5 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

(g) whether an item of environmental heritage, however described, is located on the land.

The Hills Local Environmental Plan 2019?

NO

Any proposed amendments to The Hills Local Environmental Plan 2019?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 5 North Kellyville Precinct Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 5 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

3 Contributions

(1) The name of each contributions plan under the Act, Division 7.1 applying to the land, including draft contributions plans.

08A-08D - KELLYVILLE/ROUSE HILL
THE HILLS SECTION 7.12

(2) If the land is in a region within the meaning of the Act, Division 7.1, Subdivision 4—

(a) the name of the region, and

The Greater Sydney Region

(b) the name of the Ministerial planning order in which the region is identified.

Environmental Planning and Assessment (Housing and Productivity Contribution) Order 2024

(3) If the land is in a special contributions area to which a continued 7.23 determination applies, the name of the area.

NO

(4) In this section— **continued 7.23 determination** means a 7.23 determination that—

(a) has been continued in force by the Act, Schedule 4, Part 1, and
(b) has not been repealed as provided by that part.
Note— The Act, Schedule 4, Part 1 contains other definitions that affect the interpretation of this section.

4 Complying development

(1) If the land is land on which complying development may be carried out under each of the complying development codes under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, because of that Policy, clause 1.17A(1)(c)–(e), (2), (3) or (4), 1.18(1)(c3) or 1.19.

(2) If complying development may not be carried out on the land because of 1 of those clauses, the reasons why it may not be carried out under the clause.

(3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that—
(a) a restriction applies to the land, but it may not apply to all of the land, and
(b) the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

(4) If the complying development codes are varied, under that Policy, clause 1.12, in relation to the land.

Housing Code, Rural Housing Code, Agritourism and Farm Stay Accommodation Code, Low Rise Housing Diversity Code and Greenfield Housing Code

Complying Development under the Housing Code, Rural Housing Code, Agritourism and Farm Stay Accommodation Code, Low Rise Housing Diversity Code and Greenfield Housing Code **may be** carried out on the land.

Housing Alterations Code and General Development Code

Complying Development under the Housing Alterations Code and General Development Code **may be** carried out on the land.

Industrial and Business Buildings Code

Complying Development under the Industrial and Business Buildings Code **may be** carried out on the land.

Industrial and Business Alterations, Container Recycling Facilities, Subdivision, Demolition and Fire Safety Codes

Complying Development under the Industrial and Business Alterations, Container Recycling Facilities, Subdivision, Demolition and Fire Safety Codes **may be** carried out on the land.

Note 1: Some specific land exemptions in cl.1.19 of the Codes SEPP may apply only to part of a lot, please refer the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, for further information.

Note 2: Where reference is made to an applicable map, this information can be sourced from the following websites:

The Hills Local Environmental Plan 2019 - www.thehills.nsw.gov.au
State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 5 North Kellyville Precinct) or (Appendix 10 The Hills Growth Centre Precincts Plan) – In force legislation - NSW legislation

5 Exempt development

(1) If the land is land on which exempt development may be carried out under each of the exempt development codes under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, because of that Policy, clause 1.16(1)(b1)–(d) or 1.16A.

(2) If exempt development may not be carried out on the land because of 1 of those clauses, the reasons why it may not be carried out under the clause.

(3) If the council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land, a statement that—
(a) a restriction applies to the land, but it may not apply to all of the land, and
(b) the council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land.

(4) If the exempt development codes are varied, under that Policy, clause 1.12, in relation to the land.

Exempt development may be carried out on the land. Please refer to *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* for relevant requirements and development standards for specified development.

6 Affected building notices and building product rectification orders

(1) Whether the council is aware that—

(a) an affected building notice is in force in relation to the land,

NO

(b) a building product rectification order is in force in relation to the land that has not been fully complied with,

NO

(c) a notice of intention to make a building product rectification order given in relation to the land is outstanding.

NO

(2) In this section—
affected building notice has the same meaning as in the *Building Products (Safety) Act 2017*, Part 4.
building product rectification order has the same meaning as in the *Building Products (Safety) Act 2017*.

7 Land reserved for acquisition

Whether an environmental planning instrument or proposed environmental planning instrument referred to in section 1 makes provision in relation to the acquisition of the land by an authority of the State, as referred to in the Act, section 3.15.

The Hills Local Environmental Plan 2019?

NO

Any proposed amendments to The Hills Local Environmental Plan 2019?

NO

State Environmental Planning Policy?

NO

Any proposed State Environmental Planning Policy?

NO

8 Road widening and road realignment

Whether the land is affected by road widening or road realignment under—

(a) the *Roads Act 1993*, Part 3, Division 2, or

NO

(b) an environmental planning instrument, or

NO

(c) a resolution of the council.

YES

The Hills Development Control Plan 2012 identifies the land as being affected by a proposed road or road widening. Refer Part 1(1) of this certificate for the applicable map sheet.

9 Flood related development controls

(1) If the land or part of the land is within the flood planning area and subject to flood related development controls.

NO

(2) If the land or part of the land is between the flood planning area and the probable maximum flood and subject to flood related development controls.

NO

(3) In this section—
flood planning area has the same meaning as in the Flood Risk Management Manual.
Flood Risk Management Manual means the *Flood Risk Management Manual*, ISBN 978-1-923076-17-4, published by the NSW Government in June 2023.
probable maximum flood has the same meaning as in the Flood Risk Management Manual.

10 Council and other public authority policies on hazard risk restrictions

(1) Whether any of the land is affected by an adopted policy that restricts the development of the land because of the likelihood of land slip, bush fire, tidal inundation, subsidence, acid sulfate soils, contamination, aircraft noise, salinity, coastal hazards, sea level rise or another risk, other than flooding.

(2) In this section—

adopted policy means a policy adopted—
(a) by the council, or
(b) by another public authority, if the public authority has notified the council that the policy will be included in a planning certificate issued by the council.

The land is affected by the following policies on hazard restrictions:

i. Landslip

a) By The Hills Local Environmental Plan 2019 zoning?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

b) By The Hills Local Environmental Plan 2019 local provision?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

c) By The Hills Development Control Plan 2012 provision?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

ii. Bushfire

YES

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by bushfire. That question is answered in Section 11 of this certificate.

The NSW Rural Fire Service Guidelines entitled 'Planning for Bushfire Protection 2019'. Development subject to bushfire risk will be required to address the requirements in these guidelines and can be downloaded off the RFS web site www.rfs.nsw.gov.au

The Hills Development Control Plan 2012 may also contain provisions for development on Bushfire Prone Land and Bushfire Hazard Management. Refer Part 1(1) of this certificate for the applicable Development Control Plan.

iii. Tidal Inundation

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by tidal inundation.

iv. Subsidence

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by subsidence.

v. Acid sulfate soils

NO

vi. Contamination

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by contamination or potential contamination.

vii. Aircraft noise

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by aircraft noise.

viii. Salinity

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by salinity.

ix. Coastal hazards

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by coastal hazards.

x. Sea level rise

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by sea level rise.

xi. Any other risk, other than flooding

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by any other risk, other than flooding.

11 Bush fire prone land

(1) If any of the land is bush fire prone land, designated by the Commissioner of the NSW Rural Fire Service under the Act, section 10.3, a statement that all or some of the land is bush fire prone land.

(2) If none of the land is bush fire prone land, a statement to that effect.

NO

None of the land is bushfire prone land.

12 Loose-fill asbestos insulation

If the land includes residential premises, within the meaning of the *Home Building Act 1989*, Part 8, Division 1A, that are listed on the Register kept under that Division, a statement to that effect.

Council has **not** been notified by NSW Fair Trading that the land includes any residential premises that are listed on the register. Refer to the NSW Fair Trading website at www.fairtrading.nsw.gov.au to confirm that the land is not listed on this register.

Note: There is potential for loose-fill asbestos insulation in residential premises that are not listed on the Register. Contact NSW Fair Trading for further information.

13 Mine subsidence

Whether the land is declared to be a mine subsidence district, within the meaning of the *Coal Mine Subsidence Compensation Act 2017*.

NO

14 Paper subdivision information

(1) The name of a development plan adopted by a relevant authority that—
(a) applies to the land, or
(b) is proposed to be subject to a ballot.

NO DEVELOPMENT PLAN APPLIES

(2) The date of a subdivision order that applies to the land.

NO SUBDIVISION ORDER APPLIES

(3) Words and expressions used in this section have the same meaning as in this Regulation, Part 10 and the Act, Schedule 7.

15 Property vegetation plans

If the land is land in relation to which a property vegetation plan is approved and in force under the *Native Vegetation Act 2003*, Part 4, a statement to that effect, but only if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act.

NO

16 Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under the *Biodiversity Conservation Act 2016*, Part 5, a statement to that effect, but only if the council has been notified of the existence of the agreement by the Biodiversity Conservation Trust.

NO

Note—
Biodiversity stewardship agreements include biobanking agreements under the *Threatened Species Conservation Act 1995*, Part 7A that are taken to be biodiversity stewardship agreements under the *Biodiversity Conservation Act 2016*, Part 5.

17 Biodiversity certified land

If the land is biodiversity certified land under the *Biodiversity Conservation Act 2016*, Part 8, a statement to that effect.

NO

Note—
Biodiversity certified land includes land certified under the *Threatened Species Conservation Act 1995*, Part 7AA that is taken to be certified under the *Biodiversity Conservation Act 2016*, Part 8.

18 Orders under Trees (Disputes Between Neighbours) Act 2006

Whether an order has been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land, but only if the council has been notified of the order.
NO

19 Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

(1) If the *Coastal Management Act 2016* applies to the council, whether the owner, or a previous owner, of the land has given written consent to the land being subject to

annual charges under the *Local Government Act 1993*, section 496B, for coastal protection services that relate to existing coastal protection works.

NO

(2) In this section—
existing coastal protection works has the same meaning as in the *Local Government Act 1993*, section 553B.
Note—
Existing coastal protection works are works to reduce the impact of coastal hazards on land, such as seawalls, revetments, groynes and beach nourishment, that existed before 1 January 2011.

20 Western Sydney Aerotropolis

Whether under *State Environmental Planning Policy (Precincts—Western Parkland City) 2021*, Chapter 4 the land is—

(a) in an ANEF or ANEC contour of 20 or greater, as referred to in that Chapter, section 4.17, or

NO

(b) shown on the Lighting Intensity and Wind Shear Map, or

NO

(c) shown on the Obstacle Limitation Surface Map, or

NO

(d) in the "public safety area" on the Public Safety Area Map, or

NO

(e) in the "3 kilometre wildlife buffer zone" or the "13 kilometre wildlife buffer zone" on the Wildlife Buffer Zone Map.

NO

21 Development consent conditions for seniors housing

If *State Environmental Planning Policy (Housing) 2021*, Chapter 3, Part 5 applies to the land, any conditions of a development consent granted after 11 October 2007 in relation to the land that are of the kind set out in that Policy, section 88(2).

NO

22 Site compatibility certificates and development consent conditions for affordable rental housing

(1) Whether there is a current site compatibility certificate under *State Environmental Planning Policy (Housing) 2021*, or a former site compatibility certificate, of which the council is aware, in relation to proposed development on the land and, if there is a certificate—
(a) the period for which the certificate is current, and
(b) that a copy may be obtained from the Department.

NO

(2) If *State Environmental Planning Policy (Housing) 2021*, Chapter 2, Part 2, Division 1 or 5 applies to the land, any conditions of a development consent in relation to the land that are of a kind referred to in that Policy, section 21(1) or 40(1).

(3) Any conditions of a development consent in relation to land that are of a kind referred to in *State Environmental Planning Policy (Affordable Rental Housing) 2009*, clause 17(1) or 38(1).

NO

(4) In this section—
former site compatibility certificate means a site compatibility certificate issued under *State Environmental Planning Policy (Affordable Rental Housing) 2009*.

23 Water or sewerage services

If water or sewerage services are, or are to be, provided to the land under the Water Industry Competition Act 2006, a statement to that effect.

NO

Note— A public water utility may not be the provider of some or all of the services to the land. If a water or sewerage service is provided to the land by a licensee under the Water Industry Competition Act 2006, a contract for the service will be deemed to have been entered into between the licensee and the owner of the land. A register relating to approvals and licences necessary for the provision of water or sewerage services under the Water Industry Competition Act 2006 is maintained by the Independent Pricing and Regulatory Tribunal and provides information about the areas serviced, or to be serviced, under that Act. Purchasers should check the register to understand who will service the property. Outstanding charges for water or sewerage services provided under the Water Industry Competition Act 2006 become the responsibility of the purchaser.

24 Special entertainment precincts

Whether the land or part of the land is in a special entertainment precinct within the meaning of the Local Government Act 1993, section 202B.

NO

Clause 59(2) Contaminated Land Management Act 1997

The following matters are prescribed by section 59 (2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

(a) that the land to which the certificate relates is significantly contaminated land within the meaning of that Act – if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

NO

(b) that the land to which the certificate relates is subject to a management order within the meaning of that Act – if it is subject to such an order at the date when the certificate is issued,

NO

(c) that the land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act – if it is the subject of such an approved proposal at the date when the certificate is issued,
NO

(d) that the land to which the certificate relates is subject to an ongoing maintenance order within the meaning of the Act – if it is subject to such an order at the date when the certificate is issued,

NO

(e) that the land to which the certificate relates is the subject of a site audit statement within the meaning of the Act – if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

NO

Note—
Section 53B requires site auditors to furnish local authorities with copies of site audit statements relating to site audits for the purposes of statutory requirements.

THIS PART IS DIRECTED TO THE FOLLOWING MATTERS PRESCRIBED UNDER SECTION 10.7 (5) OF THE ABOVE ACT

Note:
When information pursuant to Section 10.7(5) is requested, the council is under no obligation to furnish any of the information supplied herein pursuant to that Section.

Council draws your attention to Section 10.7(6), which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). However, this subsection does not apply to advice provided in relation to contaminated land (including the likelihood of land being contaminated land) or to the nature or extent of contamination of land within the meaning of Schedule 6.

The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate.

A. Whether there are any provisions applying to the land that control the management of trees and bushland?

YES
Part C Section 3 of The Hills Development Control Plan 2012 contain provisions for the control and management of actions in respect of trees and bushland.

B. Does the land contain a foreshore area as identified on The Hills Local Environmental Plan 2019 Foreshore Building Line map?

NO

C. Is the land subject to a listing on a public register maintained by Council under the *Protection of the Environment Operations Act 1997*?

NO

Note: This information relates specifically to the land and includes any existing or in force environmental notice, civil proceedings, or prosecutions under the Act (where notified to Council).

D. Is the land affected by any special provisions of *State Environmental Planning Policy (Resources and Energy) 2021* – Chapter 3 Extractive industries in Sydney area?

NO

E. Is the land affected by a restricted development area as identified under The Hills Development Control Plan 2012?

NO

F. Is the land in the vicinity of a heritage item or heritage conservation area as described in The Hills Local Environmental Plan 2019 **OR** State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres?

YES

Clause 5.10 (5) of The Hills Local Environmental Plan 2019 provides specific considerations for development in the vicinity of a heritage item or heritage conservation area.

G. Whether Council has executed a Voluntary Planning Agreement within the meaning of S7.4 of the *Environmental Planning and Assessment Act 1979*, as amended, in relation to the land?

YES

01/2018/VPA

H. Is the land within or adjacent to the Sydney Metro Northwest as identified on the maps prepared by Transport NSW?

YES

Refer to www.northwestrail.com.au. For any further enquiries please contact Transport NSW on 1800 019 989.

I. Does the land contain a proposed road as identified within a Development Control Plan under *State Environmental Planning Policy (Precincts-Central River City) 2021*, Chapter 3 Sydney Region Growth Centres?

NO

J. Has Council been notified by NSW Land and Property Information that the land is affected by a plan of acquisition for railway purposes (Sydney Metro Northwest)?

NO

K. Has Council been notified of the land being listed on the NSW Government's Combustible Cladding Register under the Environmental Planning and Assessment Regulation 2021?

NO

Note: There is potential for combustible cladding to be present on premises that are not listed on the Register. Contact Council's Regulatory Team for further information.

THE HILLS SHIRE COUNCIL

MICHAEL EDGAR
GENERAL MANAGER

Per: 

PLEASE NOTE: COUNCIL RETAINS THE ELECTRONIC ORIGINAL OF THIS CERTIFICATE. WHERE THIS CERTIFICATE REFERS TO INFORMATION DISPLAYED ON COUNCIL'S WEBSITE OR TO ANY EXTERNAL WEBSITE, IT REFERS TO INFORMATION DISPLAYED ON THE WEBSITE ON THE DATE THIS CERTIFICATE IS ISSUED.

ATTACHMENT 2(b)

Zone MU1 Mixed Use

1 Objectives of zone

- To encourage a diversity of business, retail, office and light industrial land uses that generate employment opportunities.
- To ensure that new development provides diverse and active street frontages to attract pedestrian traffic and to contribute to vibrant, diverse and functional streets and public spaces.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To encourage business, retail, community and other non-residential land uses on the ground floor of buildings.
- To encourage leisure and entertainment facilities in the major centres that generate activity throughout the day and evening.
- To provide for high density housing that is integrated with civic spaces.

2 Permitted without consent

Home businesses; Home occupations

3 Permitted with consent

Amusement centres; Boarding houses; Building identification signs; Business identification signs; Car parks; Centre-based child care facilities; Commercial premises; Community facilities; Entertainment facilities; Function centres; Information and education facilities; Light industries; Local distribution premises; Medical centres; Oyster aquaculture; Passenger transport facilities; Places of public worship; Recreation areas; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Shop top housing; Tank-based aquaculture; Tourist and visitor accommodation; Vehicle repair stations; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Environmental facilities; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Research stations; Residential accommodation; Resource recovery facilities; Rural industries; Sewerage systems; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste disposal facilities; Water recreation structures; Water supply systems; Wharf or boating facilities

NOTE: This land use table should be read in conjunction with the Dictionary at the end

of The Hills LEP 2019 which defines words and expressions for the purpose of the plan.
NOTE: Activities permitted without development consent are still subject to other provisions in Environmental Planning Instruments and/or Acts.

2.5 Additional permitted uses for particular land

(1) Development on particular land that is described or referred to in Schedule 1 may be carried out:
(a) with development consent, or
(b) if the Schedule so provides—without development consent,
in accordance with the conditions (if any) specified in that Schedule in relation to that development.

(2) This clause has effect despite anything to the contrary in the Land Use Table or other provision of this Plan.

Schedule 1 Additional permitted uses

(Clause 2.5)

1 Use of certain land at Rouse Hill Regional Centre, Rouse Hill

(1) This clause applies to land at Rouse Hill Regional Centre, Rouse Hill, shown as "Item 2" on the Additional Permitted Uses Map.

(2) Development for a purpose shown in Column 2 of the Table to this item is permitted with development consent in a zone shown opposite in Column 1, subject to any condition shown opposite in Column 3.

Column 1	Column 2	Column 3
Zone R3 Medium Density Residential	Residential flat buildings Shop top housing Business premises	In conjunction with shop top housing
Zone R4 High Density Residential	Business premises	In conjunction with shop top housing
Zone MU1	Attached dwellings Multi dwelling housing	

2 Use of certain land at Samantha Riley Drive, Kellyville

(1) This clause applies to certain land at Kellyville, being:
(a) 301 Samantha Riley Drive, comprising Lots 101 and 103, DP 1122070, and
(b) part of drainage reserves fronting Samantha Riley Drive, comprising part of Lot 192, DP 1249550, part of Lot 1, DP 1184376 and part of Lot 1, DP 1028391, shown as "Item 3" on the Additional Permitted Uses Map.

(2) Development for the purposes of shops is permitted with development consent.

(3) Development consent under subclause (2) may only be granted if the retail floor space on the site is no more than 1,900m².

3 Use of certain land at Wilkins Avenue and Windsor Road, Beaumont Hills

(1) This clause applies to certain land at Beaumont Hills, being:

(a) part of 1-3 Wilkins Avenue, comprising part of Lot 101, DP 1124350, and

(b) RMB 104 Windsor Road, comprising Lot 7, DP 13822, and

(c) RMB 104A Windsor Road, comprising Lot 80, DP 1014622, and

(d) RMB 105 Windsor Road, comprising Lot 104, DP 1124350,

shown as "Item 4" on the Additional Permitted Uses Map.

(2) Development for the purposes of a garden centre and landscaping material supplies is permitted with development consent.

4 (Repealed)

5 Use of certain land at Solent Circuit, Norwest

(1) This clause applies to that part of land at 11-13 Solent Circuit, Norwest, comprising Lot 5074, DP 1003042, that is zoned SP2 Infrastructure, shown as "Item 6" on the Additional Permitted Uses Map.

(2) Development for the purposes of building identification signs, business identification signs, commercial premises or residential flat buildings is permitted with consent.

6 Use of certain land within Bella Vista Station Precinct in Zone SP4

(1) This clause applies to certain land within the Bella Vista Station Precinct that is in Zone SP4, shown as "Item 7" on the Additional Permitted Uses Map.

(2) Development for the purposes of a market is permitted with development consent.

(3) Development for the purpose of a shop with a gross floor area not exceeding 2,500m^2 is permitted with development consent.

7 Use of certain land at 74 O'Briens Road, Cattai

(1) This clause applies to land at 74 O'Briens Road, Cattai, being Lot 28, DP 270416, shown as "Item 8" on the Additional Permitted Uses Map.

(2) Development for the purpose of dwelling houses is permitted with development consent.

(3) Development consent under this clause may only be granted if the consent authority is satisfied that:

(a) the development will not result in the erection of more than 300 dwelling houses on the land to which this clause applies, and

(b) no dwelling house will be erected on a lot with a lot size of less than 450 square metres.

(4) Development consent must not be granted for development under this clause unless a development control plan that provides for the phasing of development has been prepared for the land.

8 Use of certain land at Commercial Road, Rouse Hill

(1) This clause applies to certain land at Commercial Road, Rouse Hill, being part of Lot 5, DP 30916, that is in Zone R1 General Residential, shown as "Item 9" on the Additional Permitted Uses Map.

(2) Development for the purposes of shops is permitted with development consent.

(3) Development consent under subclause (2) may only be granted if the retail floor space on the site is no more than 1,700m^2.

9 Use of certain land at 6 McCausland Place, Kellyville

(1) This clause applies to land at 6 McCausland Place, Kellyville, being Lot 1, DP 1273532, shown as "Item 10" on the Additional Permitted Uses Map.

(2) Development for the purposes of a residential flat building is permitted with development consent.

(3) Development consent under subclause (2) may only be granted if the number of dwellings contained, or proposed to be contained, in the residential flat building does not exceed 20.

10 Use of certain land at 26-30 Norbrik Drive, Bella Vista

(1) This clause applies to land at 26-30 Norbrik Drive, Bella Vista, being Lot 1, DP 1217654, shown as "Item 11" on the Additional Permitted Uses Map.

(2) Development for the purposes of seniors housing is permitted with development consent.

11 Use of certain land at 2 Natura Rise, Norwest

(1) This clause applies to land at 2 Natura Rise, Norwest, being SP 97750, shown as "Item 13" on the Additional Permitted Uses Map.

(2) Development for the following purposes is permitted with development consent:

(a) restaurants or cafes, but only if the total maximum gross floor area of all restaurants and cafes on the land does not exceed 200m^2,

(b) business premises or shops, but only if the total maximum gross floor area of all business premises and shops on the land does not exceed 200m^2.

12 Use of certain land at 522 Windsor Road, Baulkham Hills

(1) This clause applies to land at 522 Windsor Road, Baulkham Hills, being Lot 533, DP 773889 and Lot 22, DP 1075051, shown as "Item 14" on the Additional Permitted Uses Map.

(2) Development for the purposes of seniors housing and associated restaurants or cafes, shops or business premises is permitted with development consent.

(3) Development consent under this clause may only be granted if:
- (a) the number of beds contained in a residential care facility that is part of the development does not exceed 120, and
- (b) the number of self-contained dwellings contained in the development does not exceed 70, and
- (c) the gross floor area of any restaurant or cafe, shop or business premises contained in the development is no more than 100m^2, with a maximum combined gross floor area of no more than 300m^2.

13 Use of certain land at Fullers Road and Old Northern Road, Glenhaven

(1) This clause applies to certain land at Glenhaven, being:
- (a) 2 and 2a Fullers Road, being Lots 1 and 2, SP 46522, and
- (b) 434 Old Northern Road, being Lot 1, DP 369807,

shown as "Item 15" on the Additional Permitted Uses Map.

(2) Development for the purposes of seniors housing is permitted with development consent if the seniors housing comprises no more than 9 self-contained dwellings.

14 Use of certain land within Bella Vista Station Precinct and Kellyville Station Precinct in Zone SP2

(1) This clause applies to certain land within the Bella Vista Station Precinct and the Kellyville Station Precinct that is in Zone SP2 Infrastructure, shown as "Item 20" on the Additional Permitted Uses Map.

(2) Development for the purposes of an environmental facility or a recreation area is permitted with development consent.

15 Use of certain land within Bella Vista Station Precinct and Kellyville Station Precinct in Zones R1 and R4

(1) This clause applies to certain land within the Bella Vista Station Precinct and the Kellyville Station Precinct that is in Zone R1 General Residential and Zone R4 High Density Residential, shown as "Item 21" on the Additional Permitted Uses Map.

(2) Development for the purposes of an exhibition village or recreation facility (outdoor) is permitted with development consent.

16 (Repealed)

17 Use of certain land at 55 Coonara Avenue, West Pennant Hills

(1) This clause applies to certain land at 55 Coonara Avenue, West Pennant Hills, being parts of Lot 61, DP 737386, that is in Zone C2 Environmental Conservation, shown as "Item 23" and "Item 24" on the Additional Permitted Uses Map.

(2) Development for the purposes of recreation areas or recreation facilities (indoor) is permitted with development consent on the land shown as "Item 23".

(3) Development for the following purposes is permitted with development consent on the land shown as "Item 24"-
(a) building identification signs,
(b) kiosks,
(c) recreation areas,
(d) restaurants or cafes, but only if the gross floor area of any restaurant or café on the land does not exceed 50 square metres.

18 Use of certain land at 40 Solent Circuit, Norwest

(1) This clause applies to land at 40 Solent Circuit, Norwest, being Lot 2107, DP 1216268, shown as "Item 12" on the Additional Permitted Uses Map.

(2) Development for the following purposes is permitted with development consent—
(a) business premises, but only if the total gross floor area of all business premises on the land does not exceed 1,500m2,
(b) recreation facilities (indoor), but only if the total gross floor area of all recreation facilities (indoor) on the land does not exceed 1,500m2,
(c) restaurants or cafes, but only if the total gross floor area of all restaurants and cafes on the land does not exceed 500m2,
(d) shops, but only if the total gross floor area of all shops on the land does not exceed 1,000m2.

19 Use of certain land at 25–31 Brookhollow Avenue, Norwest

(1) This clause applies to 25–31 Brookhollow Avenue, Norwest, Lot 71, DP 1252765, identified as "Item 25" on the Additional Permitted Uses Map.

(2) Development for the purposes of neighbourhood supermarkets is permitted with development consent if the gross floor area of all neighbourhood supermarkets on the land is no more than 1,000m2.

20 Use of certain land for residential flat buildings

(1) This clause applies to land in Zone E1 identified as item "26" on the Additional Permitted Uses Map.

(2) Development for the purposes of residential flat buildings is permitted with development consent.

21 Use of certain land at 346–350 Old Northern Road, Castle Hill

..(1) This clause applies to Lot 503, DP 1048808, 346–350 Old Northern Road, Castle Hill, identified as "Item 29" on the Additional Permitted Uses Map.

(2) Development for the purposes of seniors housing is permitted with development consent

THE HILLS SHIRE COUNCIL
3 Columbia Court, Norwest NSW 2153
PO Box 7064, Norwest 2153
ABN 25 034 494 656 | DX 9966 Norwest

PLANNING CERTIFICATE UNDER SECTION 10.7(2) & (5)

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 AS AMENDED.

Certificate Number:	**80650**
Reference:	E37757B:285207
Issue Date:	15 July 2025
Receipt No:	7887764
Fee Paid:	$ 178.00

ADDRESS:	Lot 312 DP 1274392 Commercial Road, ROUSE HILL NSW 2155
DESCRIPTION:	Lot 312 DP 1274392

The land is zoned:

Zone MU1 Mixed Use

The following prescribed matters apply to the land to which this certificate relates:

The information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment Regulation 2021.

PLEASE NOTE: THIS CERTIFICATE IS AUTOMATICALLY GENERATED. IT MAY CONTAIN EXCESSIVE SPACES AND/OR BLANK PAGES.

THIS CERTIFICATE IS DIRECTED TO THE FOLLOWING MATTERS PRESCRIBED UNDER SECTION 10.7(2) OF THE ABOVE ACT.

1 Names of relevant planning instruments and development control plans

(1) The name of each environmental planning instrument and development control plan that applies to the carrying out of development on the land.

Local Environmental Plans

The Hills Local Environmental Plan 2019

State Environmental Planning Policies

SEPP (Biodiversity and Conservation) 2021 – including but not limited to
Chapter 2 Vegetation in non rural areas
Chapter 6 Water Catchments

SEPP (Resilience and Hazards) 2021 – including but not limited to

Chapter 3 Hazardous and offensive development
Chapter 4 Remediation of land

SEPP (Industry and Employment) 2021 – Including but not limited to
Chapter 3 Advertising and signage

SEPP No.65 - Design Quality Of Residential Apartment Development

SEPP (Precincts-Central River City) 2021 – Including but not limited to
Chapter 2 State significant precincts

SEPP (Resources and Energy) 2021 – including but not limited to
Chapter 2 Mining, petroleum production and extractive industries
Chapter 3 Extractive industries in Sydney area

SEPP (Transport and Infrastructure) 2021 – including but not limited to
Chapter 2 Infrastructure
Chapter 3 Educational establishments and childcare

SEPP (Exempt and Complying Development Codes) 2008

SEPP (Planning Systems) 2021 – including but not limited to
Chapter 2 State and regional development
Chapter 4 Concurrences and consents

SEPP (Primary Production) 2021 – including but not limited to
Chapter 2 Primary production and rural development
SEPP (Precincts – Western Parkland City) 2021 – Including but not limited to

Chapter 4 Western Sydney Aerotropolis

SEPP (Housing) 2021

SEPP (Sustainable Buildings) 2022

Development Control Plans

The Hills Development Control Plan 2012

Note: the land is within The Hills Development Control Plan 2012 Part C map sheet. Refer Council's website www.thehills.nsw.gov.au to view the map sheet.Note: the land is within The Hills Development Control Plan 2012 Part D map sheet. Refer Council's website www.thehills.nsw.gov.au to view the map sheet.

(2) The name of each proposed environmental planning instrument and draft development control plan, which is or has been subject to community consultation or public exhibition under the Act, that will apply to the carrying out of development on the land.

Proposed Local Environmental Plans

No Proposed Local Environmental Plans apply to this land.

Proposed State Environmental Planning Policies

No Proposed State Environmental Planning Policies apply to the land.

Listing of proposed State Environmental Planning Instruments is dependent on advice being provided to Council of community consultation or public exhibition by the relevant public authorities. Refer Plans and Policies | Planning Portal - Department of Planning and Environment (nsw.gov.au)

Proposed Development Control Plans

No Proposed Development Control Plans apply to the land.

(3) Subsection (2) does not apply in relation to a proposed environmental planning instrument or draft development control plan if—
(a) it has been more than 3 years since the end of the public exhibition period for the proposed instrument or draft plan, or
(b) for a proposed environmental planning instrument—the Planning Secretary has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved.

(4) In this section—
proposed environmental planning instrument means a draft environmental planning instrument and includes a planning proposal for a local environmental plan.

2 Zoning and land use under relevant planning instruments

The following matters for each environmental planning instrument or draft environmental planning instrument that includes the land in a zone, however described—
(a) the identity of the zone, whether by reference to—
(i) a name, such as "Residential Zone" or "Heritage Area", or

(ii) a number, such as "Zone No 2 (a)",

The Hills Local Environmental Plan 2019 identifies the land to be:

Zone MU1 Mixed Use

(b) the purposes for which development in the zone—
(i) may be carried out without development consent, and
(ii) may not be carried out except with development consent, and
(iii) is prohibited,

Refer Attachment 2(b)

(c) whether additional permitted uses apply to the land,

YES

Refer Attachment 2(b)

(d) whether development standards applying to the land fix minimum land dimensions for the erection of a dwelling house on the land and, if so, the fixed minimum land dimensions,

The Hills Local Environmental Plan 2019?

NO

Any proposed amendments to The Hills Local Environmental Plan 2019?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 5 North Kellyville Precinct Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 5 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

(e) whether the land is in an area of outstanding biodiversity value under the *Biodiversity Conservation Act 2016*,

The Hills Local Environmental Plan 2019?

NO

Any proposed amendments to The Hills Local Environmental Plan 2019?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 5 North Kellyville Precinct Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 5 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

(f) whether the land is in a conservation area, however described,

The Hills Local Environmental Plan 2019?

NO

Any proposed amendments to The Hills Local Environmental Plan 2019?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 5 North Kellyville Precinct Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 5 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

(g) whether an item of environmental heritage, however described, is located on the land.

The Hills Local Environmental Plan 2019?

NO

Any proposed amendments to The Hills Local Environmental Plan 2019?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 5 North Kellyville Precinct Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 5 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

Any proposed amendments to the relevant instrument (Appendix 10 The Hills Growth Centre Precincts Plan)?

NO

3 Contributions

(1) The name of each contributions plan under the Act, Division 7.1 applying to the land, including draft contributions plans.

08A-08D - KELLYVILLE/ROUSE HILL
THE HILLS SECTION 7.12

(2) If the land is in a region within the meaning of the Act, Division 7.1, Subdivision 4—

(a) the name of the region, and

The Greater Sydney Region

(b) the name of the Ministerial planning order in which the region is identified.

Environmental Planning and Assessment (Housing and Productivity Contribution) Order 2024

(3) If the land is in a special contributions area to which a continued 7.23 determination applies, the name of the area.

NO

(4) In this section— **continued 7.23 determination** means a 7.23 determination that—

(a) has been continued in force by the Act, Schedule 4, Part 1, and
(b) has not been repealed as provided by that part.
Note— The Act, Schedule 4, Part 1 contains other definitions that affect the interpretation of this section.

4 Complying development

(1) If the land is land on which complying development may be carried out under each of the complying development codes under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, because of that Policy, clause 1.17A(1)(c)–(e), (2), (3) or (4), 1.18(1)(c3) or 1.19.

(2) If complying development may not be carried out on the land because of 1 of those clauses, the reasons why it may not be carried out under the clause.

(3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that—
(a) a restriction applies to the land, but it may not apply to all of the land, and
(b) the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

(4) If the complying development codes are varied, under that Policy, clause 1.12, in relation to the land.

Housing Code, Rural Housing Code, Agritourism and Farm Stay Accommodation Code, Low Rise Housing Diversity Code and Greenfield Housing Code

Complying Development under the Housing Code, Rural Housing Code, Agritourism and Farm Stay Accommodation Code, Low Rise Housing Diversity Code and Greenfield Housing Code **may be** carried out on the land.

Housing Alterations Code and General Development Code

Complying Development under the Housing Alterations Code and General Development Code **may be** carried out on the land.

Industrial and Business Buildings Code

Complying Development under the Industrial and Business Buildings Code **may be** carried out on the land.

Industrial and Business Alterations, Container Recycling Facilities, Subdivision, Demolition and Fire Safety Codes

Complying Development under the Industrial and Business Alterations, Container Recycling Facilities, Subdivision, Demolition and Fire Safety Codes **may be** carried out on the land.

Note 1: Some specific land exemptions in cl.1.19 of the Codes SEPP may apply only to part of a lot, please refer the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, for further information.

Note 2: Where reference is made to an applicable map, this information can be sourced from the following websites:

The Hills Local Environmental Plan 2019 - www.thehills.nsw.gov.au
State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres (Appendix 5 North Kellyville Precinct) or (Appendix 10 The Hills Growth Centre Precincts Plan) – In force legislation - NSW legislation

5 Exempt development

(1) If the land is land on which exempt development may be carried out under each of the exempt development codes under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, because of that Policy, clause 1.16(1)(b1)–(d) or 1.16A.

(2) If exempt development may not be carried out on the land because of 1 of those clauses, the reasons why it may not be carried out under the clause.

(3) If the council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land, a statement that—
(a) a restriction applies to the land, but it may not apply to all of the land, and
(b) the council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land.

(4) If the exempt development codes are varied, under that Policy, clause 1.12, in relation to the land.

Exempt development may be carried out on the land. Please refer to *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* for relevant requirements and development standards for specified development.

6 Affected building notices and building product rectification orders

(1) Whether the council is aware that—

(a) an affected building notice is in force in relation to the land,

NO

(b) a building product rectification order is in force in relation to the land that has not been fully complied with,

NO

(c) a notice of intention to make a building product rectification order given in relation to the land is outstanding.

NO

(2) In this section—
affected building notice has the same meaning as in the *Building Products (Safety) Act 2017*, Part 4.
building product rectification order has the same meaning as in the *Building Products (Safety) Act 2017*.

7 Land reserved for acquisition

Whether an environmental planning instrument or proposed environmental planning instrument referred to in section 1 makes provision in relation to the acquisition of the land by an authority of the State, as referred to in the Act, section 3.15.

The Hills Local Environmental Plan 2019?

NO

Any proposed amendments to The Hills Local Environmental Plan 2019?

NO

State Environmental Planning Policy?

NO

Any proposed State Environmental Planning Policy?

NO

8 Road widening and road realignment

Whether the land is affected by road widening or road realignment under—

(a) the *Roads Act 1993*, Part 3, Division 2, or

NO

(b) an environmental planning instrument, or

NO

(c) a resolution of the council.

YES

The Hills Development Control Plan 2012 identifies the land as being affected by a proposed road or road widening. Refer Part 1(1) of this certificate for the applicable map sheet.

9 Flood related development controls

(1) If the land or part of the land is within the flood planning area and subject to flood related development controls.

NO

(2) If the land or part of the land is between the flood planning area and the probable maximum flood and subject to flood related development controls.

NO

(3) In this section—
flood planning area has the same meaning as in the Flood Risk Management Manual.
Flood Risk Management Manual means the *Flood Risk Management Manual*, ISBN 978-1-923076-17-4, published by the NSW Government in June 2023.
probable maximum flood has the same meaning as in the Flood Risk Management Manual.

10 Council and other public authority policies on hazard risk restrictions

(1) Whether any of the land is affected by an adopted policy that restricts the development of the land because of the likelihood of land slip, bush fire, tidal inundation, subsidence, acid sulfate soils, contamination, aircraft noise, salinity, coastal hazards, sea level rise or another risk, other than flooding.

(2) In this section—

adopted policy means a policy adopted—
(a) by the council, or
(b) by another public authority, if the public authority has notified the council that the policy will be included in a planning certificate issued by the council.

The land is affected by the following policies on hazard restrictions:

i. Landslip

a) By The Hills Local Environmental Plan 2019 zoning?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

b) By The Hills Local Environmental Plan 2019 local provision?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

c) By The Hills Development Control Plan 2012 provision?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

ii. Bushfire

YES

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by bushfire. That question is answered in Section 11 of this certificate.

The NSW Rural Fire Service Guidelines entitled 'Planning for Bushfire Protection 2019'. Development subject to bushfire risk will be required to address the requirements in these guidelines and can be downloaded off the RFS web site www.rfs.nsw.gov.au

The Hills Development Control Plan 2012 may also contain provisions for development on Bushfire Prone Land and Bushfire Hazard Management. Refer Part 1(1) of this certificate for the applicable Development Control Plan.

iii. Tidal Inundation

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by tidal inundation.

iv. Subsidence

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by subsidence.

v. Acid sulfate soils

NO

vi. Contamination

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by contamination or potential contamination.

vii. Aircraft noise

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by aircraft noise.

viii. Salinity

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by salinity.

ix. Coastal hazards

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by coastal hazards.

x. Sea level rise

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by sea level rise.

xi. Any other risk, other than flooding

NO

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by any other risk, other than flooding.

11 Bush fire prone land

(1) If any of the land is bush fire prone land, designated by the Commissioner of the NSW Rural Fire Service under the Act, section 10.3, a statement that all or some of the land is bush fire prone land.

(2) If none of the land is bush fire prone land, a statement to that effect.

NO

None of the land is bushfire prone land.

12 Loose-fill asbestos insulation

If the land includes residential premises, within the meaning of the *Home Building Act 1989*, Part 8, Division 1A, that are listed on the Register kept under that Division, a statement to that effect.

Council has **not** been notified by NSW Fair Trading that the land includes any residential premises that are listed on the register. Refer to the NSW Fair Trading website at www.fairtrading.nsw.gov.au to confirm that the land is not listed on this register.

Note: There is potential for loose-fill asbestos insulation in residential premises that are not listed on the Register. Contact NSW Fair Trading for further information.

13 Mine subsidence

Whether the land is declared to be a mine subsidence district, within the meaning of the *Coal Mine Subsidence Compensation Act 2017*.

NO

14 Paper subdivision information

(1) The name of a development plan adopted by a relevant authority that—
(a) applies to the land, or
(b) is proposed to be subject to a ballot.

NO DEVELOPMENT PLAN APPLIES

(2) The date of a subdivision order that applies to the land.

NO SUBDIVISION ORDER APPLIES

(3) Words and expressions used in this section have the same meaning as in this Regulation, Part 10 and the Act, Schedule 7.

15 Property vegetation plans

If the land is land in relation to which a property vegetation plan is approved and in force under the *Native Vegetation Act 2003*, Part 4, a statement to that effect, but only if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act.

NO

16 Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under the *Biodiversity Conservation Act 2016*, Part 5, a statement to that effect, but only if the council has been notified of the existence of the agreement by the Biodiversity Conservation Trust.

NO

Note—
Biodiversity stewardship agreements include biobanking agreements under the *Threatened Species Conservation Act 1995*, Part 7A that are taken to be biodiversity stewardship agreements under the *Biodiversity Conservation Act 2016*, Part 5.

17 Biodiversity certified land

If the land is biodiversity certified land under the *Biodiversity Conservation Act 2016*, Part 8, a statement to that effect.

NO

Note—
Biodiversity certified land includes land certified under the *Threatened Species Conservation Act 1995*, Part 7AA that is taken to be certified under the *Biodiversity Conservation Act 2016*, Part 8.

18 Orders under Trees (Disputes Between Neighbours) Act 2006

Whether an order has been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land, but only if the council has been notified of the order.
NO

19 Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

(1) If the *Coastal Management Act 2016* applies to the council, whether the owner, or a previous owner, of the land has given written consent to the land being subject to

annual charges under the *Local Government Act 1993*, section 496B, for coastal protection services that relate to existing coastal protection works.

NO

(2) In this section—
existing coastal protection works has the same meaning as in the *Local Government Act 1993*, section 553B.
Note—
Existing coastal protection works are works to reduce the impact of coastal hazards on land, such as seawalls, revetments, groynes and beach nourishment, that existed before 1 January 2011.

20 Western Sydney Aerotropolis

Whether under *State Environmental Planning Policy (Precincts—Western Parkland City) 2021*, Chapter 4 the land is—

(a) in an ANEF or ANEC contour of 20 or greater, as referred to in that Chapter, section 4.17, or

NO

(b) shown on the Lighting Intensity and Wind Shear Map, or

NO

(c) shown on the Obstacle Limitation Surface Map, or

NO

(d) in the "public safety area" on the Public Safety Area Map, or

NO

(e) in the "3 kilometre wildlife buffer zone" or the "13 kilometre wildlife buffer zone" on the Wildlife Buffer Zone Map.

NO

21 Development consent conditions for seniors housing

If *State Environmental Planning Policy (Housing) 2021*, Chapter 3, Part 5 applies to the land, any conditions of a development consent granted after 11 October 2007 in relation to the land that are of the kind set out in that Policy, section 88(2).

NO

22 Site compatibility certificates and development consent conditions for affordable rental housing

(1) Whether there is a current site compatibility certificate under *State Environmental Planning Policy (Housing) 2021*, or a former site compatibility certificate, of which the council is aware, in relation to proposed development on the land and, if there is a certificate—
(a) the period for which the certificate is current, and
(b) that a copy may be obtained from the Department.

NO

(2) If *State Environmental Planning Policy (Housing) 2021*, Chapter 2, Part 2, Division 1 or 5 applies to the land, any conditions of a development consent in relation to the land that are of a kind referred to in that Policy, section 21(1) or 40(1).

(3) Any conditions of a development consent in relation to land that are of a kind referred to in *State Environmental Planning Policy (Affordable Rental Housing) 2009*, clause 17(1) or 38(1).

NO

(4) In this section—
former site compatibility certificate means a site compatibility certificate issued under *State Environmental Planning Policy (Affordable Rental Housing) 2009*.

23 Water or sewerage services

If water or sewerage services are, or are to be, provided to the land under the Water Industry Competition Act 2006, a statement to that effect.

NO

Note— A public water utility may not be the provider of some or all of the services to the land. If a water or sewerage service is provided to the land by a licensee under the Water Industry Competition Act 2006, a contract for the service will be deemed to have been entered into between the licensee and the owner of the land. A register relating to approvals and licences necessary for the provision of water or sewerage services under the Water Industry Competition Act 2006 is maintained by the Independent Pricing and Regulatory Tribunal and provides information about the areas serviced, or to be serviced, under that Act. Purchasers should check the register to understand who will service the property. Outstanding charges for water or sewerage services provided under the Water Industry Competition Act 2006 become the responsibility of the purchaser.

24 Special entertainment precincts

Whether the land or part of the land is in a special entertainment precinct within the meaning of the Local Government Act 1993, section 202B.

NO

Clause 59(2) Contaminated Land Management Act 1997

The following matters are prescribed by section 59 (2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

(a) that the land to which the certificate relates is significantly contaminated land within the meaning of that Act – if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

NO

(b) that the land to which the certificate relates is subject to a management order within the meaning of that Act – if it is subject to such an order at the date when the certificate is issued,

NO

(c) that the land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act – if it is the subject of such an approved proposal at the date when the certificate is issued,
NO

(d) that the land to which the certificate relates is subject to an ongoing maintenance order within the meaning of the Act – if it is subject to such an order at the date when the certificate is issued,

NO

(e) that the land to which the certificate relates is the subject of a site audit statement within the meaning of the Act – if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

NO

Note—
Section 53B requires site auditors to furnish local authorities with copies of site audit statements relating to site audits for the purposes of statutory requirements.

THIS PART IS DIRECTED TO THE FOLLOWING MATTERS PRESCRIBED UNDER SECTION 10.7 (5) OF THE ABOVE ACT

Note:
When information pursuant to Section 10.7(5) is requested, the council is under no obligation to furnish any of the information supplied herein pursuant to that Section.

Council draws your attention to Section 10.7(6), which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). However, this subsection does not apply to advice provided in relation to contaminated land (including the likelihood of land being contaminated land) or to the nature or extent of contamination of land within the meaning of Schedule 6.

The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate.

A. Whether there are any provisions applying to the land that control the management of trees and bushland?

YES
Part C Section 3 of The Hills Development Control Plan 2012 contain provisions for the control and management of actions in respect of trees and bushland.

B. Does the land contain a foreshore area as identified on The Hills Local Environmental Plan 2019 Foreshore Building Line map?

NO

C. Is the land subject to a listing on a public register maintained by Council under the *Protection of the Environment Operations Act 1997*?

NO

Note: This information relates specifically to the land and includes any existing or in force environmental notice, civil proceedings, or prosecutions under the Act (where notified to Council).

D. Is the land affected by any special provisions of *State Environmental Planning Policy (Resources and Energy) 2021* – Chapter 3 Extractive industries in Sydney area?

NO

E. Is the land affected by a restricted development area as identified under The Hills Development Control Plan 2012?

NO

F. Is the land in the vicinity of a heritage item or heritage conservation area as described in The Hills Local Environmental Plan 2019 **OR** State Environmental Planning Policy (Precincts-Central River City) 2021, Chapter 3 Sydney Region Growth Centres?

YES

Clause 5.10 (5) of The Hills Local Environmental Plan 2019 provides specific considerations for development in the vicinity of a heritage item or heritage conservation area.

G. Whether Council has executed a Voluntary Planning Agreement within the meaning of S7.4 of the *Environmental Planning and Assessment Act 1979*, as amended, in relation to the land?

YES

01/2018/VPA

H. Is the land within or adjacent to the Sydney Metro Northwest as identified on the maps prepared by Transport NSW?

YES

Refer to www.northwestrail.com.au. For any further enquiries please contact Transport NSW on 1800 019 989.

I. Does the land contain a proposed road as identified within a Development Control Plan under *State Environmental Planning Policy (Precincts-Central River City) 2021*, Chapter 3 Sydney Region Growth Centres?

NO

J. Has Council been notified by NSW Land and Property Information that the land is affected by a plan of acquisition for railway purposes (Sydney Metro Northwest)?

NO

K. Has Council been notified of the land being listed on the NSW Government's Combustible Cladding Register under the Environmental Planning and Assessment Regulation 2021?

NO

Note: There is potential for combustible cladding to be present on premises that are not listed on the Register. Contact Council's Regulatory Team for further information.

THE HILLS SHIRE COUNCIL

MICHAEL EDGAR
GENERAL MANAGER

Per: 

PLEASE NOTE: COUNCIL RETAINS THE ELECTRONIC ORIGINAL OF THIS CERTIFICATE. WHERE THIS CERTIFICATE REFERS TO INFORMATION DISPLAYED ON COUNCIL'S WEBSITE OR TO ANY EXTERNAL WEBSITE, IT REFERS TO INFORMATION DISPLAYED ON THE WEBSITE ON THE DATE THIS CERTIFICATE IS ISSUED.

ATTACHMENT 2(b)

Zone MU1 Mixed Use

1 Objectives of zone

- To encourage a diversity of business, retail, office and light industrial land uses that generate employment opportunities.
- To ensure that new development provides diverse and active street frontages to attract pedestrian traffic and to contribute to vibrant, diverse and functional streets and public spaces.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To encourage business, retail, community and other non-residential land uses on the ground floor of buildings.
- To encourage leisure and entertainment facilities in the major centres that generate activity throughout the day and evening.
- To provide for high density housing that is integrated with civic spaces.

2 Permitted without consent

Home businesses; Home occupations

3 Permitted with consent

Amusement centres; Boarding houses; Building identification signs; Business identification signs; Car parks; Centre-based child care facilities; Commercial premises; Community facilities; Entertainment facilities; Function centres; Information and education facilities; Light industries; Local distribution premises; Medical centres; Oyster aquaculture; Passenger transport facilities; Places of public worship; Recreation areas; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Shop top housing; Tank-based aquaculture; Tourist and visitor accommodation; Vehicle repair stations; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Environmental facilities; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Research stations; Residential accommodation; Resource recovery facilities; Rural industries; Sewerage systems; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste disposal facilities; Water recreation structures; Water supply systems; Wharf or boating facilities

NOTE: This land use table should be read in conjunction with the Dictionary at the end

of The Hills LEP 2019 which defines words and expressions for the purpose of the plan.
NOTE: Activities permitted without development consent are still subject to other provisions in Environmental Planning Instruments and/or Acts.

2.5 Additional permitted uses for particular land

(1) Development on particular land that is described or referred to in Schedule 1 may be carried out:
(a) with development consent, or
(b) if the Schedule so provides—without development consent,
in accordance with the conditions (if any) specified in that Schedule in relation to that development.

(2) This clause has effect despite anything to the contrary in the Land Use Table or other provision of this Plan.

Schedule 1 Additional permitted uses

(Clause 2.5)

1 Use of certain land at Rouse Hill Regional Centre, Rouse Hill

(1) This clause applies to land at Rouse Hill Regional Centre, Rouse Hill, shown as "Item 2" on the Additional Permitted Uses Map.

(2) Development for a purpose shown in Column 2 of the Table to this item is permitted with development consent in a zone shown opposite in Column 1, subject to any condition shown opposite in Column 3.

Column 1	Column 2	Column 3
Zone R3 Medium Density Residential	Residential flat buildings Shop top housing Business premises	In conjunction with shop top housing
Zone R4 High Density Residential	Business premises	In conjunction with shop top housing
Zone MU1	Attached dwellings Multi dwelling housing	

2 Use of certain land at Samantha Riley Drive, Kellyville

(1) This clause applies to certain land at Kellyville, being:
(a) 301 Samantha Riley Drive, comprising Lots 101 and 103, DP 1122070, and
(b) part of drainage reserves fronting Samantha Riley Drive, comprising part of Lot 192, DP 1249550, part of Lot 1, DP 1184376 and part of Lot 1, DP 1028391, shown as "Item 3" on the Additional Permitted Uses Map.

(2) Development for the purposes of shops is permitted with development consent.

(3) Development consent under subclause (2) may only be granted if the retail floor space on the site is no more than 1,900m².

3 Use of certain land at Wilkins Avenue and Windsor Road, Beaumont Hills

(1) This clause applies to certain land at Beaumont Hills, being:

(a) part of 1-3 Wilkins Avenue, comprising part of Lot 101, DP 1124350, and

(b) RMB 104 Windsor Road, comprising Lot 7, DP 13822, and

(c) RMB 104A Windsor Road, comprising Lot 80, DP 1014622, and

(d) RMB 105 Windsor Road, comprising Lot 104, DP 1124350,

shown as "Item 4" on the Additional Permitted Uses Map.

(2) Development for the purposes of a garden centre and landscaping material supplies is permitted with development consent.

4 (Repealed)

5 Use of certain land at Solent Circuit, Norwest

(1) This clause applies to that part of land at 11-13 Solent Circuit, Norwest, comprising Lot 5074, DP 1003042, that is zoned SP2 Infrastructure, shown as "Item 6" on the Additional Permitted Uses Map.

(2) Development for the purposes of building identification signs, business identification signs, commercial premises or residential flat buildings is permitted with consent.

6 Use of certain land within Bella Vista Station Precinct in Zone SP4

(1) This clause applies to certain land within the Bella Vista Station Precinct that is in Zone SP4, shown as "Item 7" on the Additional Permitted Uses Map.

(2) Development for the purposes of a market is permitted with development consent.

(3) Development for the purpose of a shop with a gross floor area not exceeding 2,500m^2 is permitted with development consent.

7 Use of certain land at 74 O'Briens Road, Cattai

(1) This clause applies to land at 74 O'Briens Road, Cattai, being Lot 28, DP 270416, shown as "Item 8" on the Additional Permitted Uses Map.

(2) Development for the purpose of dwelling houses is permitted with development consent.

(3) Development consent under this clause may only be granted if the consent authority is satisfied that:

(a) the development will not result in the erection of more than 300 dwelling houses on the land to which this clause applies, and

(b) no dwelling house will be erected on a lot with a lot size of less than 450 square metres.

(4) Development consent must not be granted for development under this clause unless a development control plan that provides for the phasing of development has been prepared for the land.

8 Use of certain land at Commercial Road, Rouse Hill

(1) This clause applies to certain land at Commercial Road, Rouse Hill, being part of Lot 5, DP 30916, that is in Zone R1 General Residential, shown as "Item 9" on the Additional Permitted Uses Map.

(2) Development for the purposes of shops is permitted with development consent.

(3) Development consent under subclause (2) may only be granted if the retail floor space on the site is no more than 1,700m^2.

9 Use of certain land at 6 McCausland Place, Kellyville

(1) This clause applies to land at 6 McCausland Place, Kellyville, being Lot 1, DP 1273532, shown as "Item 10" on the Additional Permitted Uses Map.

(2) Development for the purposes of a residential flat building is permitted with development consent.

(3) Development consent under subclause (2) may only be granted if the number of dwellings contained, or proposed to be contained, in the residential flat building does not exceed 20.

10 Use of certain land at 26-30 Norbrik Drive, Bella Vista

(1) This clause applies to land at 26-30 Norbrik Drive, Bella Vista, being Lot 1, DP 1217654, shown as "Item 11" on the Additional Permitted Uses Map.

(2) Development for the purposes of seniors housing is permitted with development consent.

11 Use of certain land at 2 Natura Rise, Norwest

(1) This clause applies to land at 2 Natura Rise, Norwest, being SP 97750, shown as "Item 13" on the Additional Permitted Uses Map.

(2) Development for the following purposes is permitted with development consent:

(a) restaurants or cafes, but only if the total maximum gross floor area of all restaurants and cafes on the land does not exceed 200m^2,

(b) business premises or shops, but only if the total maximum gross floor area of all business premises and shops on the land does not exceed 200m^2.

12 Use of certain land at 522 Windsor Road, Baulkham Hills

(1) This clause applies to land at 522 Windsor Road, Baulkham Hills, being Lot 533, DP 773889 and Lot 22, DP 1075051, shown as "Item 14" on the Additional Permitted Uses Map.

(2) Development for the purposes of seniors housing and associated restaurants or cafes, shops or business premises is permitted with development consent.

(3) Development consent under this clause may only be granted if:
- (a) the number of beds contained in a residential care facility that is part of the development does not exceed 120, and
- (b) the number of self-contained dwellings contained in the development does not exceed 70, and
- (c) the gross floor area of any restaurant or cafe, shop or business premises contained in the development is no more than 100m^2, with a maximum combined gross floor area of no more than 300m^2.

13 Use of certain land at Fullers Road and Old Northern Road, Glenhaven

(1) This clause applies to certain land at Glenhaven, being:
- (a) 2 and 2a Fullers Road, being Lots 1 and 2, SP 46522, and
- (b) 434 Old Northern Road, being Lot 1, DP 369807,

shown as "Item 15" on the Additional Permitted Uses Map.

(2) Development for the purposes of seniors housing is permitted with development consent if the seniors housing comprises no more than 9 self-contained dwellings.

14 Use of certain land within Bella Vista Station Precinct and Kellyville Station Precinct in Zone SP2

(1) This clause applies to certain land within the Bella Vista Station Precinct and the Kellyville Station Precinct that is in Zone SP2 Infrastructure, shown as "Item 20" on the Additional Permitted Uses Map.

(2) Development for the purposes of an environmental facility or a recreation area is permitted with development consent.

15 Use of certain land within Bella Vista Station Precinct and Kellyville Station Precinct in Zones R1 and R4

(1) This clause applies to certain land within the Bella Vista Station Precinct and the Kellyville Station Precinct that is in Zone R1 General Residential and Zone R4 High Density Residential, shown as "Item 21" on the Additional Permitted Uses Map.

(2) Development for the purposes of an exhibition village or recreation facility (outdoor) is permitted with development consent.

16 (Repealed)

17 Use of certain land at 55 Coonara Avenue, West Pennant Hills

(1) This clause applies to certain land at 55 Coonara Avenue, West Pennant Hills, being parts of Lot 61, DP 737386, that is in Zone C2 Environmental Conservation, shown as "Item 23" and "Item 24" on the Additional Permitted Uses Map.

(2) Development for the purposes of recreation areas or recreation facilities (indoor) is permitted with development consent on the land shown as "Item 23".

(3) Development for the following purposes is permitted with development consent on the land shown as "Item 24"-
(a) building identification signs,
(b) kiosks,
(c) recreation areas,
(d) restaurants or cafes, but only if the gross floor area of any restaurant or café on the land does not exceed 50 square metres.

18 Use of certain land at 40 Solent Circuit, Norwest

(1) This clause applies to land at 40 Solent Circuit, Norwest, being Lot 2107, DP 1216268, shown as "Item 12" on the Additional Permitted Uses Map.

(2) Development for the following purposes is permitted with development consent—
(a) business premises, but only if the total gross floor area of all business premises on the land does not exceed 1,500m2,
(b) recreation facilities (indoor), but only if the total gross floor area of all recreation facilities (indoor) on the land does not exceed 1,500m2,
(c) restaurants or cafes, but only if the total gross floor area of all restaurants and cafes on the land does not exceed 500m2,
(d) shops, but only if the total gross floor area of all shops on the land does not exceed 1,000m2.

19 Use of certain land at 25–31 Brookhollow Avenue, Norwest

(1) This clause applies to 25–31 Brookhollow Avenue, Norwest, Lot 71, DP 1252765, identified as "Item 25" on the Additional Permitted Uses Map.

(2) Development for the purposes of neighbourhood supermarkets is permitted with development consent if the gross floor area of all neighbourhood supermarkets on the land is no more than 1,000m2.

20 Use of certain land for residential flat buildings

(1) This clause applies to land in Zone E1 identified as item "26" on the Additional Permitted Uses Map.

(2) Development for the purposes of residential flat buildings is permitted with development consent.

21 Use of certain land at 346–350 Old Northern Road, Castle Hill

..(1) This clause applies to Lot 503, DP 1048808, 346–350 Old Northern Road, Castle Hill, identified as "Item 29" on the Additional Permitted Uses Map.

(2) Development for the purposes of seniors housing is permitted with development consent

Appendix C: Laboratory Results Summary Tables

ABBREVIATIONS AND EXPLANATIONS

Abbreviations used in the Tables:

ABC:	Ambient Background Concentration
ACM:	Asbestos Containing Material
ADWG:	AustralianDrinking Water Guidelines
AF:	Asbestos Fines
ANZG	Australian and New Zealand Guidelines
B(a)P:	Benzo(a)pyrene
CEC:	Cation Exchange Capacity
CRC:	Cooperative Research Centre
CT:	Contaminant Threshold
EILs:	Ecological Investigation Levels
ESLs:	Ecological Screening Levels
FA:	Fibrous Asbestos
GIL:	Groundwater Investigation Levels
GSW:	General Solid Waste
HILs:	Health Investigation Levels
HSLs:	Health Screening Levels
HSL-SSA:	Health Screening Level-SiteSpecific Assessment
kg/L	kilograms per litre
NA:	Not Analysed
NC:	Not Calculated
NEPM:	National Environmental Protection Measure
NHMRC:	National Health and Medical Research Council
NL:	Not Limiting
NSL:	No Set Limit
OCP:	Organochlorine Pesticides
OPP:	Organophosphorus Pesticides
PAHs:	Polycyclic Aromatic Hydrocarbons
%w/w:	weight per weight
ppm:	Parts per million
PCBs:	Polychlorinated Biphenyls
PCE:	Perchloroethylene (Tetrachloroethylene or Teterachloroethene)
pH_{KCL} :	pH of filtered 1:20, 1M KCL extract, shaken overnight
pH_{ox} :	pH of filtered 1:20 1M KCl after peroxide digestion
PQL:	Practical Quantitation Limit
RS:	Rinsate Sample
RSL:	Regional Screening Levels
RSW:	Restricted Solid Waste
SAC:	Site Assessment Criteria
SCC:	Specific Contaminant Concentration
S_{Cr}:	Chromium reducible sulfur
S_{POS}:	Peroxide oxidisable Sulfur
SSA:	Site Specific Assessment
SSHSLs:	Site Specific Health Screening Levels
TAA:	Total Actual Acidity in 1M KCL extract titrated to pH6.5
TB:	Trip Blank
TCA:	1,1,1 Trichloroethane (methyl chloroform)
TCE:	Trichloroethylene (Trichloroethene)
TCLP:	Toxicity Characteristics Leaching Procedure
TPA:	Total Potential Acidity, 1M KCL peroxide digest
TS:	Trip Spike
TRH:	Total Recoverable Hydrocarbons
TSA:	Total Sulfide Acidity (TPA-TAA)
UCL:	Upper Level Confidence Limit on Mean Value
USEPA	United States Environmental Protection Agency
VOCC:	Volatile Organic Chlorinated Compounds
WHO:	World Health Organisation

Table Specific Explanations:

HIL Tables:

- The chromium results are for Total Chromium which includes Chromium III and VI. For initial screening purposes, we have assumed that the samples contain only Chromium VI unless demonstrated otherwise by additional analysis.
- Carcinogenic PAHs is a toxicity weighted sum of analyte concentrations for a specific list of PAH compounds relative to B(a)P. It is also refered to as the B(a)P Toxic Equivalence Quotient (TEQ).
- Statistical calculations are undertaken using ProUCL (USEPA). Statistical calculation is usually undertaken using data from fill samples.

EIL/ESL Table:

- ABC Values for selected metals have been adopted from the published background concentrations presented in Olszowy et. al., (1995), Trace Element Concentrations in Soils from Rural and Urban New South Wales (the 25th percentile values for old suburbs with high traffic have been quoted).

Waste Classification and TCLP Table:

- Data assessed using the NSW EPA Waste Classification Guidelines, Part 1: Classifying Waste (2014).
- The assessment of Total Moderately Harmful pesticides includes: Dichlorovos, Dimethoate, Fenitrothion, Ethion, Malathion and Parathion-methyl, Fenthion, Methathion and Chlorpyrifos-methyl.
- Assessment of Total Scheduled pesticides include: HBC, alpha-BHC, gamma-BHC, beta-BHC, Heptachlor, Aldrin, Heptachlor Epoxide, gamma-Chlordane, alpha-chlordane, pp-DDE, Dieldrin, Endrin, pp-DDD, pp-DDT, Endrin Aldehyde.

QA/QC Table:

- Field blank, Inter and Intra laboratory duplicate results are reported in mg/kg.
- Trip spike results are reported as percentage recovery.
- Field rinsate results are reported in µg/L.

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TABLE S1
SOIL LABORATORY RESULTS COMPARED TO NEPM 2013.
HIL-D: 'Commercial/Industrial'

All data in mg/kg unless stated otherwise			HEAVY METALS								PAHs		ORGANOCHLORINE PESTICIDES (OCPs)							OP PESTICIDES (OPPs)	TOTAL PCBs	ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	Carcinogenic PAHs	HCB	Endosulfan	Methoxychlor	Aldrin & Dieldrin	Chlordane	DDT, DDD & DDE	Heptachlor	Chlorpyrifos		
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100
Site Assessment Criteria (SAC)			3000	900	3600	240000	1500	730	6000	400000	4000	40	80	2000	2500	45	530	3600	50	2000	7	Detected/Not Detected
Sample Reference	**Sample Depth**	**Sample Description**																				
TP501	0-0.1	F: Silty Clay	**10**	<0.4	**17**	**12**	**24**	<0.1	**4**	**16**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP502	0-0.1	F: Silty Gravel	**5**	<0.4	**14**	**25**	**24**	<0.1	**14**	**46**	**0.98**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP502 [LD]	0-0.1	Lab Duplicate	<4	<0.4	**14**	**23**	**17**	<0.1	**11**	**40**	**2.4**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
TP502	0.2-0.3	F: Silty Clay	**7**	<0.4	**11**	**22**	**23**	<0.1	**8**	**36**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP503	0-0.1	F: Silty Clay	**9**	<0.4	**14**	**22**	**22**	<0.1	**5**	**32**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP503	0.2-0.3	F: Silty Clay	**6**	<0.4	**10**	**25**	**25**	<0.1	**24**	**97**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP504	0-0.1	F: Silty Clay	**14**	<0.4	**12**	**22**	**22**	<0.1	**18**	**69**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
TP504	0.2-0.1	F: Silty Clay	**12**	<0.4	**13**	**22**	**27**	<0.1	**20**	**69**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP505	0-0.1	F: Silty Clay	**7**	<0.4	**17**	**22**	**31**	<0.1	**9**	**35**	**3.3**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP505	0.4-0.5	F: Silty Clay	**7**	<0.4	**15**	**8**	**19**	<0.1	**5**	**17**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP506	0-0.1	F: Silty Clay	**6**	<0.4	**12**	**14**	**18**	<0.1	**5**	**30**	**0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP506	0.4-0.5	F: Silty Clay	**6**	<0.4	**17**	**11**	**16**	<0.1	**7**	**20**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP507	0-0.1	F: Silty Clayey Gravel	<4	<0.4	**14**	**38**	**18**	<0.1	**14**	**39**	**1.2**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP508	0-0.1	F: Silty Clay	**8**	<0.4	**9**	**12**	**23**	<0.1	**4**	**21**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP509	0-0.1	F: Silty Clay	**13**	<0.4	**14**	**28**	**24**	<0.1	**18**	**62**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP509 [LD]	0-0.1	Lab Duplicate	**26**	<0.4	**10**	**24**	**19**	<0.1	**15**	**54**	**5.5**	**0.8**	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
TP510	0-0.1	F: Silty Clay	**8**	<0.4	**11**	**17**	**22**	<0.1	**9**	**37**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP510	0.6-0.7	F: Silty Clay	**30**	<0.4	**9**	**28**	**25**	<0.1	**33**	**110**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP511	0-0.1	F: Silty Clay	**7**	<0.4	**17**	**18**	**18**	<0.1	**7**	**27**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP511	0.3-0.4	F: Silty Clay	**6**	<0.4	**14**	**12**	**19**	<0.1	**6**	**18**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP512	0-0.1	F: Silty Clay	**12**	<0.4	**14**	**11**	**26**	<0.1	**4**	**19**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP513	0-0.1	F: Silty Clay	**13**	<0.4	**17**	**15**	**25**	<0.1	**5**	**27**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP514	0-0.1	F: Silty Clay	**5**	<0.4	**14**	**21**	**22**	<0.1	**9**	**36**	**3.2**	**0.6**	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP515	0-0.1	F: Silty Clay	**5**	<0.4	**17**	**34**	**22**	<0.1	**22**	**35**	**1**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP515	0.2-0.3	F: Silty Clay	**6**	<0.4	**15**	**11**	**18**	<0.1	**4**	**12**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP516	0-0.1	F: Silty Clay	**9**	<0.4	**13**	**16**	**21**	<0.1	**6**	**38**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP516 [LD]	0-0.1	Lab Duplicate	**11**	<0.4	**17**	**19**	**24**	<0.1	**9**	**49**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
TP517	0-0.1	F: Silty Clay	**13**	<0.4	**18**	**12**	**22**	<0.1	**8**	**23**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP518	0-0.1	F: Silty Clay	**8**	<0.4	**19**	**14**	**24**	<0.1	**5**	**20**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP519	0-0.1	F: Silty Clay	**8**	<0.4	**20**	**21**	**25**	<0.1	**7**	**34**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP520	0-0.1	F: Silty Clay	**10**	<0.4	**16**	**14**	**25**	<0.1	**8**	**37**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP521	0-0.1	F: Silty Sandy Clay	**4**	<0.4	**15**	**44**	**46**	<0.1	**25**	**61**	**1.3**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	**1.2**	Not Detected
TP521	0.4-0.5	Silty Clay	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA
TP522	0-0.1	F: Silty Clay	**4**	<0.4	**12**	**19**	**27**	<0.1	**6**	**34**	**0.4**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP522	0.3-0.4	F: Silty Clay	**10**	<0.4	**20**	**11**	**24**	<0.1	**5**	**16**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP523	0-0.1	F: Silty Clayey Gravel	<4	<0.4	**16**	**23**	**25**	<0.1	**14**	**42**	**3.1**	**0.6**	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP524	0-0.1	F: Silty Clay	**8**	<0.4	**21**	**17**	**26**	<0.1	**10**	**31**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP524 [LD]	0-0.1	Lab Duplicate	**7**	<0.4	**19**	**16**	**25**	<0.1	**9**	**30**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
TP525	0-0.1	F: Silty Clay	**8**	<0.4	**16**	**13**	**27**	<0.1	**7**	**26**	**1.1**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP526	0-0.1	F: Silty Clay	**7**	<0.4	**20**	**15**	**26**	<0.1	**7**	**26**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP527	0-0.1	F: Silty Clay	**11**	<0.4	**19**	**16**	**26**	<0.1	**9**	**31**	**0.2**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP528	0-0.1	F: Silty Clay	**8**	<0.4	**18**	**15**	**28**	<0.1	**10**	**38**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP529	0-0.1	F: Silty Clay	**7**	<0.4	**19**	**15**	**28**	<0.1	**8**	**27**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP530	0-0.1	F: Silty Clay	**9**	<0.4	**27**	**22**	**24**	<0.1	**19**	**37**	**1.2**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP530	0.3-0.4	F: Silty Clay	**9**	<0.4	**34**	**13**	**22**	<0.1	**11**	**17**	**0.67**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP531	0-0.1	F: Silty Clayey Sand	<4	<0.4	**4**	**4**	**5**	**0.5**	**3**	**26**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP531	0.2-0.3	F: Silty Clayey Sand	**5**	<0.4	**5**	**4**	**7**	**0.2**	**3**	**15**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP531 [LD]	0.2-0.3	Lab Duplicate	**6**	<0.4	**5**	**3**	**7**	**0.2**	**2**	**7**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP532	0-0.1	F: Silty Clayey Gravel	<4	<0.4	**15**	**29**	**22**	<0.1	**11**	**39**	**1.6**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	Not Detected
TP532 [LD]	0-0.1	Lab Duplicate	<4	<0.4	**17**	**23**	**69**	<0.1	**10**	**83**	**1.6**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
TP532	0.2-0.3	F: Silty Clayey Gravel	**4**	<0.4	**11**	**17**	**19**	<0.1	**14**	**42**	**0.2**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP501	0-0.1	Duplicate of TP504	**12**	<0.4	**15**	**26**	**25**	<0.1	**22**	**87**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
SDUP502	0-0.1	Duplicate of TP511	**7.5**	<0.40	**19**	**28**	**29**	<0.10	**13**	**53**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA
SDUP503	0-0.1	Duplicate of TP521	**6**	<0.4	**14**	**41**	**45**	<0.1	**16**	**54**	**0.51**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	NA
SDUP504	0-0.1	Duplicate of TP522	**4.6**	<0.40	**16**	**21**	**30**	<0.10	**7.5**	**41**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA
SDUP507	0-0.1	Duplicate of TP501	**11**	<0.4	**17**	**12**	**24**	<0.1	**4**	**16**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP508	0.2-0.3	Duplicate of TP503	**6.4**	<0.40	**11**	**28**	**23**	<0.10	**17**	**76**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Number of Samples			56	56	56	56	56	56	56	56	56	56	42	42	42	42	42	2	42	42	41	32
Maximum Value			30	<PQL	34	44	69	0.5	33	110	5.5	0.8	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	1.2	Not Detected

Concentration above the SAC — **VALUE**
Concentration above the PQL — **Bold**
Asbestos Detected — **Detected**

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TABLE S2
SOIL LABORATORY RESULTS COMPARED TO HSLs
All data in mg/kg unless stated otherwise

					C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Field PID Measurement
PQL - Envirolab Services					25	50	0.2	0.5	1	1	1	ppm
NEPM 2013 HSL Land Use Category					**HSL-D: COMMERCIAL/INDUSTRIAL**							
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**								
TP501	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	3.1
TP502	0-0.1	F: Silty Gravel	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP502 - [LAB_DUP]	0-0.1	Lab Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
TP502	0.2-0.3	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.3
TP503	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP503	0.2-0.3	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP504	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP504	0.2-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.3
TP505	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP505	0.4-0.5	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP506	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP506	0.4-0.5	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP507	0-0.1	F: Silty Clayey Gravel	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP508	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP509	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP509 - [LAB_DUP]	0-0.1	Lab Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
TP510	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP510	0.6-0.7	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP511	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP511	0.3-0.4	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP512	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP513	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP514	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP515	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP515	0.2-0.3	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP516	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP516 - [LAB_DUP]	0-0.1	Lab Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
TP517	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.3
TP518	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
TP519	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
TP520	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP521	0-0.1	F: Silty Sandy Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
TP522	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.3
TP522	0.3-0.4	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
TP523	0-0.1	F: Silty Clayey Gravel	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.3
TP524	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP524 - [LAB_DUP]	0-0.1	Lab Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
TP525	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP526	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP527	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP528	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP529	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP530	0-0.1	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP530	0.3-0.4	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP531	0-0.1	F: Silty Clayey Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP531	0.2-0.3	F: Silty Clayey Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
TP531 - [LAB_DUP]	0.2-0.3	Lab Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
TP532	0-0.1	F: Silty Clayey Gravel	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
TP532 - [LAB_DUP]	0-0.1	Lab Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
TP532	0.2-0.3	F: Silty Clayey Gravel	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
SDUP501	0-0.1	Duplicate of TP504	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
SDUP502	0-0.1	Duplicate of TP511	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
SDUP503	0-0.1	Duplicate of TP521	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
SDUP504	0-0.1	Duplicate of TP522	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
SDUP507	0-0.1	Duplicate of TP501	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
SDUP508	0.2-0.3	Duplicate of TP503	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	-
Total Number of Samples					56	56	56	56	56	56	56	44
Maximum Value					<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	3.1

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**
The guideline corresponding to the concentration above the SAC is highlighted in grey in the Site Assessment Criteria Table below

HSL SOIL ASSESSMENT CRITERIA

Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
TP501	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP502	0-0.1	F: Silty Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP502 - [LAB_DUP]	0-0.1	Lab Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP502	0.2-0.3	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP503	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP503	0.2-0.3	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP504	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP504	0.2-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP505	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP505	0.4-0.5	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP506	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP506	0.4-0.5	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP507	0-0.1	F: Silty Clayey Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP508	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP509	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP509 - [LAB_DUP]	0-0.1	Lab Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP510	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP510	0.6-0.7	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP511	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP511	0.3-0.4	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP512	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP513	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP514	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP515	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP515	0.2-0.3	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP516	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP516 - [LAB_DUP]	0-0.1	Lab Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP517	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP518	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP519	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP520	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP521	0-0.1	F: Silty Sandy Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP522	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP522	0.3-0.4	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP523	0-0.1	F: Silty Clayey Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP524	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP524 - [LAB_DUP]	0-0.1	Lab Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP525	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP526	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP527	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP528	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP529	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP530	0-0.1	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP530	0.3-0.4	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP531	0-0.1	F: Silty Clayey Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP531	0.2-0.3	F: Silty Clayey Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP531 - [LAB_DUP]	0.2-0.3	Lab Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP532	0-0.1	F: Silty Clayey Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP532 - [LAB_DUP]	0-0.1	Lab Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP532	0.2-0.3	F: Silty Clayey Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP501	0-0.1	Duplicate of TP504	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP502	0-0.1	Duplicate of TP511	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP503	0-0.1	Duplicate of TP521	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP504	0-0.1	Duplicate of TP522	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP507	0-0.1	Duplicate of TP501	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP508	0.2-0.3	Duplicate of TP503	0m to <1m	Sand	260	NL	3	NL	NL	230	NL

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TABLE S3
SOIL LABORATORY RESULTS COMPARED TO MANAGEMENT LIMITS
All data in mg/kg unless stated otherwise

			C_6-C_{10} (F1) plus BTEX	>C_{10}-C_{16} (F2) plus napthalene	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)
PQL - Envirolab Services			25	50	100	100
NEPM 2013 Land Use Category			**COMMERCIAL/INDUSTRIAL**			
Sample Reference	**Sample Depth**	**Soil Texture**				
TP501	0-0.1	Coarse	<25	<50	<100	<100
TP502	0-0.1	Coarse	<25	<50	<100	**140**
TP502 - [LAB_DUP]	0-0.1	Coarse	<25	<50	**120**	**170**
TP502	0.2-0.3	Coarse	<25	<50	<100	<100
TP503	0-0.1	Coarse	<25	<50	<100	<100
TP503	0.2-0.3	Coarse	<25	<50	<100	<100
TP504	0-0.1	Coarse	<25	<50	<100	<100
TP504	0.2-0.1	Coarse	<25	<50	<100	<100
TP505	0-0.1	Coarse	<25	<50	**230**	**110**
TP505	0.4-0.5	Coarse	<25	<50	<100	<100
TP506	0-0.1	Coarse	<25	<50	<100	<100
TP506	0.4-0.5	Coarse	<25	<50	<100	<100
TP507	0-0.1	Coarse	<25	<50	**200**	**320**
TP508	0-0.1	Coarse	<25	<50	<100	<100
TP509	0-0.1	Coarse	<25	<50	<100	<100
TP509 - [LAB_DUP]	0-0.1	Coarse	<25	<50	<100	<100
TP510	0-0.1	Coarse	<25	<50	<100	<100
TP510	0.6-0.7	Coarse	<25	<50	<100	<100
TP511	0-0.1	Coarse	<25	<50	<100	<100
TP511	0.3-0.4	Coarse	<25	<50	<100	<100
TP512	0-0.1	Coarse	<25	<50	<100	<100
TP513	0-0.1	Coarse	<25	<50	<100	<100
TP514	0-0.1	Coarse	<25	<50	**120**	**200**
TP515	0-0.1	Coarse	<25	<50	<100	**170**
TP515	0.2-0.3	Coarse	<25	<50	<100	<100
TP516	0-0.1	Coarse	<25	<50	<100	<100
TP516 - [LAB_DUP]	0-0.1	Coarse	<25	<50	<100	<100
TP517	0-0.1	Coarse	<25	<50	<100	<100
TP518	0-0.1	Coarse	<25	<50	<100	<100
TP519	0-0.1	Coarse	<25	<50	<100	<100
TP520	0-0.1	Coarse	<25	<50	<100	<100
TP521	0-0.1	Coarse	<25	<50	<100	<100
TP522	0-0.1	Coarse	<25	<50	<100	<100
TP522	0.3-0.4	Coarse	<25	<50	<100	<100
TP523	0-0.1	Coarse	<25	<50	**310**	**420**
TP524	0-0.1	Coarse	<25	<50	<100	<100
TP524 - [LAB_DUP]	0-0.1	Coarse	<25	<50	<100	<100
TP525	0-0.1	Coarse	<25	<50	<100	<100
TP526	0-0.1	Coarse	<25	<50	<100	<100
TP527	0-0.1	Coarse	<25	<50	<100	<100
TP528	0-0.1	Coarse	<25	<50	<100	<100
TP529	0-0.1	Coarse	<25	<50	<100	<100
TP530	0-0.1	Coarse	<25	<50	<100	<100
TP530	0.3-0.4	Coarse	<25	<50	<100	<100
TP531	0-0.1	Coarse	<25	<50	<100	<100
TP531	0.2-0.3	Coarse	<25	<50	<100	<100
TP531 - [LAB_DUP]	0.2-0.3	Coarse	<25	<50	<100	<100
TP532	0-0.1	Coarse	<25	<50	**210**	**330**
TP532 - [LAB_DUP]	0-0.1	Coarse	<25	<50	**200**	**310**
TP532	0.2-0.3	Coarse	<25	<50	<100	<100
SDUP501	0-0.1	Coarse	<25	<50	<100	<100
SDUP502	0-0.1	Coarse	<25	<50	<100	<100
SDUP503	0-0.1	Coarse	<25	<50	<100	<100
SDUP504	0-0.1	Coarse	<25	<50	<100	<100
SDUP507	0-0.1	Coarse	<25	<50	<100	<100
SDUP508	0.2-0.3	Coarse	<25	<50	<100	<100
Total Number of Samples			56	56	56	56
Maximum Value			<PQL	<PQL	310	420

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**

MANAGEMENT LIMIT ASSESSMENT CRITERIA

Sample Reference	**Sample Depth**	**Soil Texture**	C_6-C_{10} (F1) plus BTEX	>C_{10}-C_{16} (F2) plus napthalene	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)
TP501	0-0.1	Coarse	700	1000	3500	10000
TP502	0-0.1	Coarse	700	1000	3500	10000
TP502 - [LAB_DUP]	0-0.1	Coarse	700	1000	3500	10000
TP502	0.2-0.3	Coarse	700	1000	3500	10000
TP503	0-0.1	Coarse	700	1000	3500	10000
TP503	0.2-0.3	Coarse	700	1000	3500	10000
TP504	0-0.1	Coarse	700	1000	3500	10000
TP504	0.2-0.1	Coarse	700	1000	3500	10000
TP505	0-0.1	Coarse	700	1000	3500	10000
TP505	0.4-0.5	Coarse	700	1000	3500	10000
TP506	0-0.1	Coarse	700	1000	3500	10000
TP506	0.4-0.5	Coarse	700	1000	3500	10000
TP507	0-0.1	Coarse	700	1000	3500	10000
TP508	0-0.1	Coarse	700	1000	3500	10000
TP509	0-0.1	Coarse	700	1000	3500	10000
TP509 - [LAB_DUP]	0-0.1	Coarse	700	1000	3500	10000
TP510	0-0.1	Coarse	700	1000	3500	10000
TP510	0.6-0.7	Coarse	700	1000	3500	10000
TP511	0-0.1	Coarse	700	1000	3500	10000
TP511	0.3-0.4	Coarse	700	1000	3500	10000
TP512	0-0.1	Coarse	700	1000	3500	10000
TP513	0-0.1	Coarse	700	1000	3500	10000
TP514	0-0.1	Coarse	700	1000	3500	10000
TP515	0-0.1	Coarse	700	1000	3500	10000
TP515	0.2-0.3	Coarse	700	1000	3500	10000
TP516	0-0.1	Coarse	700	1000	3500	10000
TP516 - [LAB_DUP]	0-0.1	Coarse	700	1000	3500	10000
TP517	0-0.1	Coarse	700	1000	3500	10000
TP518	0-0.1	Coarse	700	1000	3500	10000
TP519	0-0.1	Coarse	700	1000	3500	10000
TP520	0-0.1	Coarse	700	1000	3500	10000
TP521	0-0.1	Coarse	700	1000	3500	10000
TP522	0-0.1	Coarse	700	1000	3500	10000
TP522	0.3-0.4	Coarse	700	1000	3500	10000
TP523	0-0.1	Coarse	700	1000	3500	10000
TP524	0-0.1	Coarse	700	1000	3500	10000
TP524 - [LAB_DUP]	0-0.1	Coarse	700	1000	3500	10000
TP525	0-0.1	Coarse	700	1000	3500	10000
TP526	0-0.1	Coarse	700	1000	3500	10000
TP527	0-0.1	Coarse	700	1000	3500	10000
TP528	0-0.1	Coarse	700	1000	3500	10000
TP529	0-0.1	Coarse	700	1000	3500	10000
TP530	0-0.1	Coarse	700	1000	3500	10000
TP530	0.3-0.4	Coarse	700	1000	3500	10000
TP531	0-0.1	Coarse	700	1000	3500	10000
TP531	0.2-0.3	Coarse	700	1000	3500	10000
TP531 - [LAB_DUP]	0.2-0.3	Coarse	700	1000	3500	10000
TP532	0-0.1	Coarse	700	1000	3500	10000
TP532 - [LAB_DUP]	0-0.1	Coarse	700	1000	3500	10000
TP532	0.2-0.3	Coarse	700	1000	3500	10000
SDUP501	0-0.1	Coarse	700	1000	3500	10000
SDUP502	0-0.1	Coarse	700	1000	3500	10000
SDUP503	0-0.1	Coarse	700	1000	3500	10000
SDUP504	0-0.1	Coarse	700	1000	3500	10000
SDUP507	0-0.1	Coarse	700	1000	3500	10000
SDUP508	0.2-0.3	Coarse	700	1000	3500	10000

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TABLE S4
SOIL LABORATORY RESULTS COMPARED T0 DIRECT CONTACT CRITERIA
All data in mg/kg unless stated otherwise

Analyte		C_6-C_{10}	>C_{10}-C_{16}	>C_{16}-C_{34}	>C_{34}-C_{40}	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	PID
PQL - Envirolab Services		25	50	100	100	0.2	0.5	1	1	1	
CRC 2011 -Direct contact Criteria		26,000	20,000	27,000	38,000	430	99,000	27,000	81,000	11,000	
Site Use		COMMERCIAL/INDUSTRIAL - DIRECT SOIL CONTACT									
Sample Reference	**Sample Depth**										
TP501	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**3.1**
TP502	0-0.1	<25	<50	<100	**140**	<0.2	<0.5	<1	<1	<1	**0.1**
TP502 - [LAB_DUP]	0-0.1	<25	<50	**120**	**170**	<0.2	<0.5	<1	<1	<1	-
TP502	0.2-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.3**
TP503	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP503	0.2-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP504	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP504	0.2-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.3**
TP505	0-0.1	<25	<50	**230**	**110**	<0.2	<0.5	<1	<1	<1	**0.1**
TP505	0.4-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP506	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP506	0.4-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP507	0-0.1	<25	<50	**200**	**320**	<0.2	<0.5	<1	<1	<1	**0.1**
TP508	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP509	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP509 - [LAB_DUP]	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	-
TP510	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP510	0.6-0.7	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP511	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP511	0.3-0.4	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP512	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP513	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP514	0-0.1	<25	<50	**120**	**200**	<0.2	<0.5	<1	<1	<1	**0.1**
TP515	0-0.1	<25	<50	<100	**170**	<0.2	<0.5	<1	<1	<1	**0.1**
TP515	0.2-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP516	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP516 - [LAB_DUP]	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	-
TP517	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.3**
TP518	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.2**
TP519	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.2**
TP520	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP521	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.2**
TP522	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.3**
TP522	0.3-0.4	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.2**
TP523	0-0.1	<25	<50	**310**	**420**	<0.2	<0.5	<1	<1	<1	**0.3**
TP524	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP524 - [LAB_DUP]	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	-
TP525	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP526	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP527	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP528	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP529	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP530	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP530	0.3-0.4	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP531	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
TP531	0.2-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
TP531 - [LAB_DUP]	0.2-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	-
TP532	0-0.1	<25	<50	**210**	**330**	<0.2	<0.5	<1	<1	<1	**0**
TP532 - [LAB_DUP]	0-0.1	<25	<50	**200**	**310**	<0.2	<0.5	<1	<1	<1	-
TP532	0.2-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0**
SDUP501	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	-
SDUP502	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	-
SDUP503	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	-
SDUP504	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	-
SDUP507	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	-
SDUP508	0.2-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	-
Total Number of Samples		56	56	56	56	56	56	56	56	56	44
Maximum Value		<PQL	<PQL	310	420	<PQL	<PQL	<PQL	<PQL	<PQL	3.1

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**

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TABLE S5
ASBESTOS QUANTIFICATION - FIELD OBSERVATIONS AND LABORATORY RESULTS
HIL-D:Commercial/Industrial

FIELD DATA															LABORATORY DATA									
Date Sampled	Sample reference	Sample Depth	Visible ACM in top 100mm	Approx. Volume of Soil (L)	Soil Mass (g)	Mass ACM (g)	Mass Asbestos in ACM (g)	[Asbestos from ACM in soil] (%w/w)	Mass ACM <7mm (g)	Mass Asbestos in ACM <7mm (g)	[Asbestos from ACM <7mm in soil] (%w/w)	Mass FA (g)	Mass Asbestos in FA (g)	[Asbestos from FA in soil] (%w/w)	Lab Report Number	Sample refeference	Sample Depth	Sample Mass (g)	Asbestos ID in soil (AS4964) >0.1g/kg	Trace Analysis	Total Asbestos (g/kg)	Asbestos ID in soil <0.1g/kg	ACM >7mm Estimation (g)	FA and AF Estimation (g)	ACM >7mm Estimation %(w/w)	FA and AF Estimation %(w/w)
SAC			**No**					**0.05**			**0.001**			**0.001**											**0.05**	**0.001**
25/07/2025	TP501	0-0.2	No	10	1,205	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP501	0-0.1	677.2	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
22/07/2025	TP502	0-0.1	No	10	1,040	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP502	0-0.1	902.5	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
22/07/2025	TP502	0.1-0.2	No	10	1,070	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP502	0.2-0.5	No	10	1,045	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP502	0.5-1.0	No	10	1,135	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
25/07/2025	TP503	0-0.1	No	10	1,120	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP503	0-0.1	585.85	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
25/07/2025	TP503	0.1-0.5	No	10	1,050	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP504	0-0.1	No	10	1,175	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP504	0.1-0.4	No	10	1,005	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP504	0.2-0.1	631.56	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP505	0-0.1	No	10	1,040	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP505	0-0.1	792.26	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP505	0.1-0.4	No	10	1,090	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP505	0.4-0.8	No	10	1,050	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP505	0.8-1.3	No	10	1,190	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP505	1.3-1.6	No	<10	930	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP506	0-0.1	No	10	1,120	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP506	0-0.1	746.13	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP506	0.1-0.6	No	10	1,035	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP506	0.6-1.1	No	<10	895	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP506	1.5-1.9	No	10	1,145	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP507	0-0.2	No	10	1,100	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP507	0-0.1	876.56	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP507	0.2-0.5	No	10	1,035	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
25/07/2025	TP508	0-0.1	No	10	1,020	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP508	0-0.1	713.64	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
25/07/2025	TP508	0.1-0.4	No	10	1,010	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP509	0-0.2	No	10	1,130	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP509	0-0.1	787.57	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
22/07/2025	TP510	0-0.1	No	10	1,000	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP510	0-0.1	708.3	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
22/07/2025	TP510	0.1-0.5	No	10	1,110	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP510	0.5-1.0	No	10	1,055	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP510	1.0-1.5	No	10	1,105	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP510	1.5-2.0	No	10	1,105	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP510	2.0-2.5	No	10	1,255	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP510	2.5-2.8	No	10	1,030	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP511	0-0.1	No	<10	930	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP511	0-0.1	705.89	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP511	0.1-0.3	No	10	1,140	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP511	0.3-0.5	No	10	1,190	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
25/07/2025	TP512	0-0.1	No	10	1,015	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP512	0-0.1	667.47	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
25/07/2025	TP512	0.1-0.4	No	10	1,010	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP513	0-0.1	No	<10	990	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP513	0-0.1	630.62	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
22/07/2025	TP513	0.1-0.4	No	10	1,060	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22/07/2025	TP514	0-0.1	No	10	1,110	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP514	0-0.1	929.41	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP515	0-0.1	No	10	1,040	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP515	0-0.1	725.72	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP515	0.1-0.6	No	<10	985	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
25/07/2025	TP516	0-0.1	No	10	1,005	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP516	0-0.1	639.62	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
25/07/2025	TP516	0.1-0.4	No	10	1,040	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP517	0-0.2	No	10	1,120	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP517	0-0.1	654.49	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP518	0-0.2	No	<10	965	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP518	0-0.1	652.79	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP519	0-0.1	No	10	1,010	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP519	0-0.1	762.7	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP519	0.1-0.3	No	<10	955	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24/07/2025	TP520	0-0.1	No	10	1,120	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP520	0-0.1	622.12	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP520	0.1-0.3	No	<10	980	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP521	0-0.2	No	10	1,050	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP521	0-0.1	787.32	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP522	0-0.15	No	10	760	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/07/2025	TP522	0.15-0.4	No	10	1,175	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP522	0-0.1	525.91	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
23/07/2025	TP523	0-0.3	No	10	1,095	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP523	0-0.1	887.91	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP524	0-0.2	No	10	1,020	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP524	0-0.1	527.89	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP525	0-0.2	No	10	1,120	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP525	0-0.1	688.01	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP526	0-0.2	No	10	1,070	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP526	0-0.1	588.75	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP527	0-0.1	No	10	1,010	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP527	0-0.1	513.34	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP527	0.1-0.6	No	10	1,065	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24/07/2025	TP528	0-0.1	No	10	1,040	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP528	0-0.1	622.96	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP528	0.1-0.3	No	10	930	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24/07/2025	TP529	0-0.1	No	10	1,020	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP529	0-0.1	581.32	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP530	0-0.2	No	10	1,030	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP530	0-0.1	593.87	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP530	0.2-0.7	No	10	1,120	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24/07/2025	TP530	0.7-1.1	No	10	1,090	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24/07/2025	TP531	0-0.2	No	10	1,320	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP531	0-0.1	763.64	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP531	0.2-0.3	No	10	1,170	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24/07/2025	TP531	0.3-0.6	No	10	1,165	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24/07/2025	TP532	0-0.1	No	10	1,075	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	386894	TP532	0-0.1	878.03	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
24/07/2025	TP532	0.1-0.5	No	10	1,120	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24/07/2025	TP532	0.5-0.7	No	10	1,105	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Concentration above the SAC **VALUE**

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TABLE S6
SOIL LABORATORY RESULTS COMPARED TO NEPM 2013 EILs AND ESLs
All data in mg/kg unless stated otherwise

Land Use Category				COMMERCIAL/INDUSTRIAL																		
							AGED HEAVY METALS-EILs						EILs		ESLs							
				pH	CEC (cmolc/kg)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	$>C_{10}$-C_{16} (F2)	$>C_{16}$-C_{34} (F3)	$>C_{34}$-C_{40} (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P
PQL - Envirolab Services				-	1	-	4	1	1	1	1	1	1	0.1	25	50	100	100	0.2	0.5	1	1	0.05
Ambient Background Concentration (ABC)				-	-	-	NSL	13	28	163	5	122	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	**Sample Depth**	**Sample Description**	**Soil Texture**																			
TP501	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**10**	**17**	**12**	**24**	**4**	**16**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP502	0-0.1	F: Silty Gravel	Coarse	NA	NA	NA	**5**	**14**	**25**	**24**	**14**	**46**	<1	<0.1	<25	<50	<100	140	<0.2	<0.5	<1	<1	0.1
TP502 - [LAB_DUP]	0-0.1	Lab Duplicate	Coarse	NA	NA	NA	**<4**	**14**	**23**	**17**	**11**	**40**	<1	<0.1	<25	<50	120	170	<0.2	<0.5	<1	<1	0.2
TP502	0.2-0.3	F: Silty Clay	Coarse	NA	NA	NA	**7**	**11**	**22**	**23**	**8**	**36**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP503	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**9**	**14**	**22**	**22**	**5**	**32**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP503	0.2-0.3	F: Silty Clay	Coarse	NA	NA	NA	**6**	**10**	**25**	**25**	**24**	**97**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP504	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**14**	**12**	**22**	**22**	**18**	**69**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP504	0.2-0.1	F: Silty Clay	Coarse	NA	NA	NA	**12**	**13**	**22**	**27**	**20**	**69**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP505	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**7**	**17**	**22**	**31**	**9**	**35**	<1	<0.1	<25	<50	230	110	<0.2	<0.5	<1	<1	0.3
TP505	0.4-0.5	F: Silty Clay	Coarse	NA	NA	NA	**7**	**15**	**8**	**19**	**5**	**17**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP506	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**6**	**12**	**14**	**18**	**5**	**30**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	0.05
TP506	0.4-0.5	F: Silty Clay	Coarse	NA	NA	NA	**6**	**17**	**11**	**16**	**7**	**20**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP507	0-0.1	F: Silty Clayey Gravel	Coarse	NA	NA	NA	**<4**	**14**	**38**	**18**	**14**	**39**	<1	<0.1	<25	<50	200	320	<0.2	<0.5	<1	<1	0.2
TP508	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**8**	**9**	**12**	**23**	**4**	**21**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP509	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**13**	**14**	**28**	**24**	**18**	**62**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP509 - [LAB_DUP]	0-0.1	Lab Duplicate	Coarse	NA	NA	NA	**26**	**10**	**24**	**19**	**15**	**54**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	0.56
TP510	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**8**	**11**	**17**	**22**	**9**	**37**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP510	0.6-0.7	F: Silty Clay	Coarse	NA	NA	NA	**30**	**9**	**28**	**25**	**33**	**110**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP511	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**7**	**17**	**18**	**18**	**7**	**27**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP511	0.3-0.4	F: Silty Clay	Coarse	NA	NA	NA	**6**	**14**	**12**	**19**	**6**	**18**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP512	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**12**	**14**	**11**	**26**	**4**	**19**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP513	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**13**	**17**	**15**	**25**	**5**	**27**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP514	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**5**	**14**	**21**	**22**	**9**	**36**	<1	<0.1	<25	<50	120	200	<0.2	<0.5	<1	<1	0.4
TP515	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**5**	**17**	**34**	**22**	**22**	**35**	<1	<0.1	<25	<50	<100	170	<0.2	<0.5	<1	<1	0.1
TP515	0.2-0.3	F: Silty Clay	Coarse	NA	NA	NA	**6**	**15**	**11**	**18**	**4**	**12**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP516	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**9**	**13**	**16**	**21**	**6**	**38**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP516 - [LAB_DUP]	0-0.1	Lab Duplicate	Coarse	NA	NA	NA	**11**	**17**	**19**	**24**	**9**	**49**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP517	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**13**	**18**	**12**	**22**	**8**	**23**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP518	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**8**	**19**	**14**	**24**	**5**	**20**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP519	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**8**	**20**	**21**	**25**	**7**	**34**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP520	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**10**	**16**	**14**	**25**	**8**	**37**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP521	0-0.1	F: Silty Sandy Clay	Coarse	NA	NA	NA	**4**	**15**	**44**	**46**	**25**	**61**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	0.2
TP522	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**4**	**12**	**19**	**27**	**6**	**34**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	0.1
TP522	0.3-0.4	F: Silty Clay	Coarse	NA	NA	NA	**10**	**20**	**11**	**24**	**5**	**16**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP523	0-0.1	F: Silty Clayey Gravel	Coarse	NA	NA	NA	**<4**	**16**	**23**	**25**	**14**	**42**	<1	<0.1	<25	<50	310	420	<0.2	<0.5	<1	<1	0.4
TP524	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**8**	**21**	**17**	**26**	**10**	**31**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP524 - [LAB_DUP]	0-0.1	Lab Duplicate	Coarse	NA	NA	NA	**7**	**19**	**16**	**25**	**9**	**30**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP525	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**8**	**16**	**13**	**27**	**7**	**26**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	0.1
TP526	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**7**	**20**	**15**	**26**	**7**	**26**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP527	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**11**	**19**	**16**	**26**	**9**	**31**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	0.05
TP528	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**8**	**18**	**15**	**28**	**10**	**38**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP529	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**7**	**19**	**15**	**28**	**8**	**27**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP530	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	**9**	**27**	**22**	**24**	**19**	**37**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	0.1
TP530	0.3-0.4	F: Silty Clay	Coarse	NA	NA	NA	**9**	**34**	**13**	**22**	**11**	**17**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	0.1
TP531	0-0.1	F: Silty Clayey Sand	Coarse	NA	NA	NA	**<4**	**4**	**4**	**5**	**3**	**26**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP531	0.2-0.3	F: Silty Clayey Sand	Coarse	NA	NA	NA	**5**	**5**	**4**	**7**	**3**	**15**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP531 - [LAB_DUP]	0.2-0.3	Lab Duplicate	Coarse	NA	NA	NA	**6**	**5**	**3**	**7**	**2**	**7**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
TP532	0-0.1	F: Silty Clayey Gravel	Coarse	NA	NA	NA	**<4**	**15**	**29**	**22**	**11**	**39**	<1	<0.1	<25	<50	210	330	<0.2	<0.5	<1	<1	0.2
TP532 - [LAB_DUP]	0-0.1	Lab Duplicate	Coarse	NA	NA	NA	**<4**	**17**	**23**	**69**	**10**	**83**	<1	<0.1	<25	<50	200	310	<0.2	<0.5	<1	<1	0.2
TP532	0.2-0.3	F: Silty Clayey Gravel	Coarse	NA	NA	NA	**4**	**11**	**17**	**19**	**14**	**42**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	0.06
SDUP501	0-0.1	Duplicate of TP504	Coarse	NA	NA	NA	**12**	**15**	**26**	**25**	**22**	**87**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
SDUP502	0-0.1	Duplicate of TP511	Coarse	NA	NA	NA	**7.5**	**19**	**28**	**29**	**13**	**53**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1
SDUP503	0-0.1	Duplicate of TP521	Coarse	NA	NA	NA	**6**	**14**	**41**	**45**	**16**	**54**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	0.1
SDUP504	0-0.1	Duplicate of TP522	Coarse	NA	NA	NA	**4.6**	**16**	**21**	**30**	**7.5**	**41**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1
SDUP507	0-0.1	Duplicate of TP501	Coarse	NA	NA	NA	**11**	**17**	**12**	**24**	**4**	**16**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
SDUP508	0.2-0.3	Duplicate of TP503	Coarse	NA	NA	NA	**6.4**	**11**	**28**	**23**	**17**	**76**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1
Total Number of Samples				0	0	0	56	56	56	56	56	56	56	42	56	56	56	56	56	56	56	56	56
Maximum Value				NA	NA	NA	30	34	44	69	33	110	<PQL	<PQL	<PQL	<PQL	310	420	<PQL	<PQL	<PQL	<PQL	0.56

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**
The guideline corresponding to the elevated value is highlighted in grey in the EIL and ESL Assessment Criteria Table below

EIL AND ESL ASSESSMENT CRITERIA

Sample Reference	Sample Depth	Sample Description	Soil Texture	pH	CEC (cmolc/kg)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	$>C_{10}$-C_{16} (F2)	$>C_{16}$-C_{34} (F3)	$>C_{34}$-C_{40} (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P
TP501	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP502	0-0.1	F: Silty Gravel	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP502 - [LAB_DUP]	0-0.1	Lab Duplicate	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP502	0.2-0.3	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP503	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP503	0.2-0.3	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP504	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP504	0.2-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP505	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP505	0.4-0.5	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP506	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP506	0.4-0.5	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP507	0-0.1	F: Silty Clayey Gravel	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP508	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP509	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP509 - [LAB_DUP]	0-0.1	Lab Duplicate	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP510	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP510	0.6-0.7	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP511	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP511	0.3-0.4	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP512	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP513	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP514	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP515	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP515	0.2-0.3	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP516	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP516 - [LAB_DUP]	0-0.1	Lab Duplicate	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP517	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP518	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP519	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP520	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP521	0-0.1	F: Silty Sandy Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP522	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP522	0.3-0.4	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP523	0-0.1	F: Silty Clayey Gravel	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP524	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP524 - [LAB_DUP]	0-0.1	Lab Duplicate	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP525	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP526	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP527	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP528	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP529	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP530	0-0.1	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP530	0.3-0.4	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP531	0-0.1	F: Silty Clayey Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP531	0.2-0.3	F: Silty Clayey Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP531 - [LAB_DUP]	0.2-0.3	Lab Duplicate	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP532	0-0.1	F: Silty Clayey Gravel	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP532 - [LAB_DUP]	0-0.1	Lab Duplicate	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP532	0.2-0.3	F: Silty Clayey Gravel	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
SDUP501	0-0.1	Duplicate of TP504	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
SDUP502	0-0.1	Duplicate of TP511	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
SDUP503	0-0.1	Duplicate of TP521	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
SDUP504	0-0.1	Duplicate of TP522	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
SDUP507	0-0.1	Duplicate of TP501	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
SDUP508	0.2-0.3	Duplicate of TP503	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72

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TABLE S7
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - ECOLOGY
Units are µg/Kg unless stated otherwise.

	PQL	NEMP 2025	TP502	TP502 - [LAB_DUP]	TP504	TP504	TP505	TP506	TP509	TP510	TP511	SDUP501	SDUP502
	Envirolab	Indirect exposure	0-0.1	0-0.1	0-0.1	0.2-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
	Services	All land use	F: Silty Gravel	Lab Duplicate	F: Silty Clay	F: Silty Clay	F: Silty Clay	F: Silty Clay	F: Silty Clay	F: Silty Clay	F: Silty Clay	Duplicate of TP504	Duplicate of TP511
PFAS Compound													
Perfluorobutanesulfonic acid	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	0.1	3	**0.4**	**0.3**	<0.1	**0.1**	**0.9**	**0.2**	**0.1**	**0.1**	**0.2**	**0.1**	<0.1
Perfluorodecanesulfonic acid	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorobutanoic acid	0.2	NSL	<0.2	<0.2	**0.2**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluoropentanoic acid	0.2	NSL	<0.2	<0.2	**0.2**	<0.2	<0.2	<0.2	**0.2**	<0.2	<0.2	**0.2**	<0.2
Perfluorohexanoic acid	0.1	NSL	<0.1	<0.1	**0.3**	**0.2**	<0.1	<0.1	**0.3**	**0.1**	<0.1	**0.3**	<0.1
Perfluoroheptanoic acid	0.1	NSL	<0.1	<0.1	**0.5**	**0.3**	<0.1	<0.1	**0.4**	**0.3**	**0.1**	**0.4**	<0.1
Perfluorooctanoic acid PFOA	0.1	3	**0.2**	**0.1**	**1.1**	**0.7**	**0.3**	<0.1	**1.1**	**1.2**	**0.3**	**1.1**	**0.2**
Perfluorononanoic acid	0.1	NSL	<0.1	<0.1	**0.2**	**0.2**	<0.1	<0.1	**0.4**	**0.4**	**0.1**	**0.3**	<0.1
Perfluorodecanoic acid	0.5	NSL	<0.5	<0.5	**2.0**	**2.0**	<0.5	<0.5	**3.0**	**3.0**	**0.8**	**2.0**	**0.7**
Perfluoroundecanoic acid	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	<0.5	<0.5	<0.5
Perfluorododecanoic acid	0.5	NSL	<0.5	<0.5	**2.0**	**1.0**	<0.5	<0.5	**2.0**	**2.0**	**0.7**	**2.0**	<0.5
Perfluorotridecanoic acid	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	5	NSL	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4:2 FTS	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
6:2 FTS	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	0.1	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
10:2 FTS	0.1	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorooctane sulfonamide	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	5	NSL	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MePerfluorooctanesulf-amid oacetic acid	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EtPerfluorooctanesulf-amid oacetic acid	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total Positive PFHxS & PFOS	0.1	NSL	**0.4**	**0.3**	<0.1	**0.1**	**0.9**	**0.2**	**0.1**	**0.1**	**0.2**	**0.1**	<0.1
Total Positive PFOS & PFOA	0.1	NSL	**0.6**	**0.5**	**1.1**	**0.8**	**1.2**	**0.2**	**1.2**	**1.3**	**0.5**	**1.2**	**0.2**
Total Positive PFAS	0.1	NSL	**0.6**	**0.5**	**5.9**	**4.5**	**1.2**	**0.2**	**6.8**	**7.6**	**2.2**	**6.9**	**0.9**

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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TABLE S8
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - HUMAN HEALTH
Units are µg/Kg unless stated otherwise.

	PQL Envirolab Services	NEMP 2025 Industrial/ Commercial	TP502 0-0.1 F: Silty Gravel	TP502 - [LAB_DUP] 0-0.1 Lab Duplicate	TP504 0-0.1 F: Silty Clay	TP504 0.2-0.1 F: Silty Clay	TP505 0-0.1 F: Silty Clay	TP506 0-0.1 F: Silty Clay	TP509 0-0.1 F: Silty Clay	TP510 0-0.1 F: Silty Clay	TP511 0-0.1 F: Silty Clay	SDUP501 0-0.1 Duplicate of TP504	SDUP502 0-0.1 Duplicate of TP511
PFAS Compound													
Perfluorobutanesulfonic acid	0.1	NSL	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
Perfluoropentanesulfonic acid	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	0.1	NSL	**0.4**	**0.3**	<0.1	**0.1**	**0.9**	**0.2**	**0.1**	**0.1**	**0.2**	**0.1**	<0.1
Perfluorodecanesulfonic acid	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorobutanoic acid	0.2	NSL	<0.2	<0.2	**0.2**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluoropentanoic acid	0.2	NSL	<0.2	<0.2	**0.2**	<0.2	<0.2	<0.2	**0.2**	<0.2	<0.2	**0.2**	<0.2
Perfluorohexanoic acid	0.1	NSL	<0.1	<0.1	**0.3**	**0.2**	<0.1	<0.1	**0.3**	**0.1**	<0.1	**0.3**	<0.1
Perfluoroheptanoic acid	0.1	NSL	<0.1	<0.1	**0.5**	**0.3**	<0.1	<0.1	**0.4**	**0.3**	**0.1**	**0.4**	<0.1
Perfluorooctanoic acid PFOA	0.1	50,000	**0.2**	**0.1**	**1.1**	**0.7**	**0.3**	<0.1	**1.1**	**1.2**	**0.3**	**1.1**	**0.2**
Perfluorononanoic acid	0.1	NSL	<0.1	<0.1	**0.2**	**0.2**	<0.1	<0.1	**0.4**	**0.4**	**0.1**	**0.3**	<0.1
Perfluorodecanoic acid	0.5	NSL	<0.5	<0.5	**2.0**	**2.0**	<0.5	<0.5	**3.0**	**3.0**	**0.8**	**2.0**	**0.7**
Perfluoroundecanoic acid	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	<0.5	<0.5	<0.5
Perfluorododecanoic acid	0.5	NSL	<0.5	<0.5	**2.0**	**1.0**	<0.5	<0.5	**2.0**	**2.0**	**0.7**	**2.0**	<0.5
Perfluorotridecanoic acid	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	5	NSL	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4:2 FTS	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
6:2 FTS	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	0.1	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
10:2 FTS	0.1	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorooctane sulfonamide	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	5	NSL	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MePerfluorooctanesulf-amid oacetic acid	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EtPerfluorooctanesulf-amid oacetic acid	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total Positive PFHxS & PFOS	0.1	20,000	**0.4**	**0.3**	<0.1	**0.1**	**0.9**	**0.2**	**0.1**	**0.1**	**0.2**	**0.1**	<0.1
Total Positive PFOS & PFOA	0.1	NSL	**0.6**	**0.5**	**1.1**	**0.8**	**1.2**	**0.2**	**1.2**	**1.3**	**0.5**	**1.2**	**0.2**
Total Positive PFAS	0.1	NSL	**0.6**	**0.5**	**5.9**	**4.5**	**1.2**	**0.2**	**6.8**	**7.6**	**2.2**	**6.9**	**0.9**

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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ABBREVIATIONS AND EXPLANATIONS

Abbreviations used in the Tables:

ADWG: AustralianDrinking Water Guidelines
ANZG Australian and New Zealand Guidelines
B(a)P: Benzo(a)pyrene
CRC: Cooperative Research Centre
CT: Contaminant Threshold
ESLs: Ecological Screening Levels
FTS: Fluorotelomer sulfonic acid
GIL: Groundwater Investigation Levels
HILs: Health Investigation Levels
HSLs: Health Screening Levels
HSL-SSA: Health Screening Level-SiteSpecific Assessment
NA: Not Analysed
NC: Not Calculated
NEPM: National Environmental Protection Measure
NHMRC: National Health and Medical Research Council
NL: Not Limiting
NSL: No Set Limit
OCP: Organochlorine Pesticides
OPP: Organophosphorus Pesticides
PAHs: Polycyclic Aromatic Hydrocarbons
ppm: Parts per million
PCBs: Polychlorinated Biphenyls
PCE: Perchloroethylene (Tetrachloroethylene or Tetrachloroethene)
PFAS: Per- and polyfluoroalkyl substances
PFHxS: Perfluorohexanesulfonic acid
PFOA: Perfluorooctanoic acid
PFOS: Perfluorooctanesulfonic acid
PQL: Practical Quantitation Limit
RS: Rinsate Sample
RSL: Regional Screening Levels
SAC: Site Assessment Criteria
SCC: Specific Contaminant Concentration
SSA: Site Specific Assessment
SSHSLs Site Specific Health Screening Levels
TB: Trip Blank
TCA: 1,1,1 Trichloroethane (methyl chloroform)
TCE: Trichloroethylene (Trichloroethene)
TS: Trip Spike
TRH: Total Recoverable Hydrocarbons
UCL: Upper Level Confidence Limit on Mean Value
USEPA United States Environmental Protection Agency
VOCC: Volatile Organic Chlorinated Compounds
WHO: World Health Organisation

Table Specific Explanations:

Groundwater Ecology Tables:

- 95% refers to a concentration that has been derived to protect 95% of aquatic species
- Statistical calculations are undertaken using ProUCL (USEPA). Statistical calculation is usually undertaken using data from fill samples.

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TABLE G1
SUMMARY OF GROUNDWATER LABORATORY RESULTS COMPARED TO ECOLOGICAL GILs SAC
All results in µg/L unless stated otherwise.

	PQL Envirolab Services	ANZG 2018 Fresh Waters	SAMPLES									
			MW1	MW1 - [LAB_DUP]	MW4	MW6	MW102	MW103	MW109	WDUP1 (MW102)	WDUP2 (MW6)	WDUP2 - [LAB_DUP]
Metals and Metalloids												
Arsenic (As III)	1	24	**1**	**1**	<1	<1	**2**	<1	**2**	**3**	<1	-
Cadmium	0.1	0.2	<0.1	<0.1	**0.1**	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1	-
Chromium (SAC for Cr III adopted)	1	3.3	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
Copper	1	1.4	<1	<1	**2**	<1	<1	<1	<1	<1	<1	-
Lead	1	3.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
Total Mercury (inorganic)	0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Nickel	1	11	**9**	**9**	**20**	**21**	**23**	**9**	**6**	**24**	**18**	-
Zinc	1	8	**7**	**7**	**75**	**34**	**21**	**8**	**4**	**22**	**30**	-
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)												
Benzene	1	950	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	1	180	**11**	**8**	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m+p-xylene	2	75	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-xylene	1	350	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total xylenes	2	NSL	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Recoverable Hydrocarbons (TRHs)												
TRH F1	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
TRH F2	50	NSL	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
TRH F3	100	NSL	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
TRH F4	100	NSL	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Volatile Organic Compounds (VOCs), including chlorinated VOCs												
Dichlorodifluoromethane	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	10	100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromomethane	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichlorofluoromethane	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	1	700	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	1	90	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	1	370	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,2-dichloropropane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	1	1900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	1	270	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	1	240	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	1	950	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	1	900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	1	330	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	1	6500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	1	180	**11**	**8**	<1	<1	<1	<1	<1	<1	<1	<1
1,3-dichloropropane	1	1100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	1	70	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	1	55	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m+p-xylene	2	75	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Styrene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	1	400	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-xylene	1	350	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene	1	30	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromobenzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-propyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-chlorotoluene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-chlorotoluene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tert-butyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-dichlorobenzene	1	260	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sec-butyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	1	60	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-isopropyl toluene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	1	160	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-butyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	1	85	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Polycyclic Aromatic Hydrocarbons (PAHs)												
Naphthalene	0.2	16	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Acenaphthylene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Acenaphthene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Fluorene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Phenanthrene	0.1	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Anthracene	0.1	0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Fluoranthene	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Pyrene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Benzo(a)anthracene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Chrysene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Benzo(b,j+k)fluoranthene	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-
Benzo(a)pyrene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Indeno(1,2,3-c,d)pyrene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Dibenzo(a,h)anthracene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Benzo(g,h,i)perylene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**
GIL >PQL Red

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TABLE G2
SUMMARY OF GROUNDWATER LABORATORY RESULTS COMPARED TO HUMAN CONTACT GILs
All results in µg/L unless stated otherwise.

	PQL Envirolab Services	Recreational (10 x NHMRC ADWG)	SAMPLES									
			MW1	MW1 - [LAB_DUP]	MW4	MW6	MW102	MW103	MW109	WDUP1 (MW102)	WDUP2 (MW6)	WDUP2 - [LAB_DUP]
Metals and Metalloids												
Arsenic (As III)	1	100	**1**	**1**	<1	<1	**2**	<1	**2**	**3**	<1	-
Cadmium	0.1	20	<0.1	<0.1	**0.1**	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1	-
Chromium (total)	1	500	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
Copper	1	20000	<1	<1	**2**	<1	<1	<1	<1	<1	<1	-
Lead	1	100	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
Total Mercury (inorganic)	0.05	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Nickel	1	200	**9**	**9**	**20**	**21**	**23**	**9**	**6**	**24**	**18**	-
Zinc	1	30000	**7**	**7**	**75**	**34**	**21**	**8**	**4**	**22**	**30**	-
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)												
Benzene	1	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	1	8000	**11**	**8**	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	3000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m+p-xylene	2	NSL	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-xylene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total xylenes	2	6000	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Recoverable Hydrocarbons (TRHs)												
TRH F1	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
TRH F2	50	NSL	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
TRH F3	100	NSL	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
TRH F4	100	NSL	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Volatile Organic Compounds (VOCs), including chlorinated VOCs												
Dichlorodifluoromethane	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	10	3	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromomethane	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichlorofluoromethane	10	NSL	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	1	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	1	600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	1	600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	1	2500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,2-dichloropropane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	1	30	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	1	30	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	1	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	1	1000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	1	1000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	1	8000	**11**	**8**	<1	<1	<1	<1	<1	<1	<1	<1
1,3-dichloropropane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	1	500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	1	3000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	3000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m+p-xylene	2	NSL	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Styrene	1	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-xylene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromobenzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-propyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-chlorotoluene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-chlorotoluene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tert-butyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-dichlorobenzene	1	200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sec-butyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	1	400	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-isopropyl toluene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	1	15000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-butyl benzene	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	1	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	1	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	1	7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Polycyclic Aromatic Hydrocarbons (PAHs)												
Naphthalene	0.2	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Acenaphthylene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Acenaphthene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Fluorene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Phenanthrene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Anthracene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Fluoranthene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Pyrene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Benzo(a)anthracene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Chrysene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Benzo(b,j+k)fluoranthene	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-
Benzo(a)pyrene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Indeno(1,2,3-c,d)pyrene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Dibenzo(a,h)anthracene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
Benzo(g,h,i)perylene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**
GIL >PQL Red

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TABLE G3
GROUNDWATER LABORATORY RESULTS COMPARED TO SITE SPECIFIC HSLs - RISK ASSESSMENT
All results in µg/L unless stated otherwise.

	PQL Envirolab Services	NHMRC ADWG 2011	WHO 2008	USEPA RSL Tapwater 2017	SAMPLES									
					MW1	MW1 - [LAB_DUP]	MW4	MW6	MW102	MW103	MW109	WDUP1 (MW102)	WDUP2 (MW6)	WDUP2 - [LAB_DUP]
Total Recoverable Hydrocarbons (TRH)														
C_6-C_9 Aliphatics (assessed using F1)	10	-	100	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C_9-C_{14} Aliphatics (assessed using F2)	50	-	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)														
Benzene	1	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	1	800	-	-	**11**	**8**	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	300	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total xylenes	2	600	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Polycyclic Aromatic Hydrocarbons (PAHs)														
Naphthalene	1	-	-	6.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Volatile Organic Compounds (VOCs), including chlorinated VOCs														
Dichlorodifluoromethane	10	-	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	10	-	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	10	0.3	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromomethane	10	-	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	10	-	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichlorofluoromethane	10	-	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	1	30	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	1	60	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	1	60	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane	1	250	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	1		-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,2-dichloropropane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	1	3	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	1	3	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	1	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	1	100	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	1	100	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	1	800	-	-	**11**	**8**	<1	<1	<1	<1	<1	<1	<1	<1
1,3-dichloropropane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	1	50	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	1	300	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	300	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m+p-xylene	2	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Styrene	1	30	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-xylene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromobenzene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-propyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-chlorotoluene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-chlorotoluene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tert-butyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-dichlorobenzene	1	20	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sec-butyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	1	40	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-isopropyl toluene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	1	1500	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-butyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	1	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	1	30	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	1		-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	1	7	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**
GIL >PQL Red

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TABLE G4
SUMMARY OF PFAS CONCENTRATIONS IN GROUNDWATER - ECOLOGY
All results in µg/L unless stated otherwise.

	PQL Envirolab Services	NEMP 2025 99% Freshwater	SAMPLES							
			MW1	MW4	MW6	MW102	MW103	MW109	WDUP1 (MW102)	WDUP2 (MW6)
PFAS Compound										
Perfluorobutanesulfonic acid	0.0004	NSL	**0.004**	**0.0005**	**0.002**	<0.0004	<0.0004	<0.0004	<0.0004	**0.002**
Perfluoropentanesulfonic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	0.0002	NSL	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanesulfonic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	0.0002	0.00023	**0.001**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanesulfonic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorobutanoic acid	0.002	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	0.002	NSL	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid	0.0004	NSL	**0.0009**	<0.0004	<0.0004	**0.0008**	<0.0004	<0.0004	**0.0009**	<0.0004
Perfluoroheptanoic acid	0.0004	NSL	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Perfluorooctanoic acid PFOA	0.0002	19	**0.001**	**0.0002**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**
Perfluorononanoic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid	0.005	NSL	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4:2 FTS	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 FTS	0.0004	NSL	**0.0069**	**0.0006**	<0.0004	**0.01**	**0.002**	<0.0004	**0.01**	<0.0004
8:2 FTS	0.0004	NSL	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
10:2 FTS	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfon amide	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf-amid oacetic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EtPerfluorooctanesulf-amid oacetic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Positive PFHxS & PFOS	0.1	NSL	**0.002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Positive PFOS & PFOA	0.1	NSL	**0.0027**	**0.0002**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**
Total Positive PFAS	0.1	NSL	**0.015**	**0.001**	**0.002**	**0.011**	**0.0022**	<0.0002	**0.011**	**0.0021**

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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TABLE G5
SUMMARY OF PFAS CONCENTRATIONS IN GROUNDWATER - HUMAN HEALTH
All results in µg/L unless stated otherwise.

	PQL Envirolab Services	NEMP 2025 Recreational	SAMPLES							
			MW1	MW4	MW6	MW102	MW103	MW109	WDUP1 (MW102)	WDUP2 (MW6)
PFAS Compound										
Perfluorobutanesulfonic acid - PFBS	0.0004	NSL	**0.004**	**0.0005**	**0.002**	<0.0004	<0.0004	<0.0004	<0.0004	**0.002**
Perfluoropentanesulfonic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	0.0002	NSL	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanesulfonic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid - PFOS	0.0002	NSL	**0.001**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanesulfonic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorobutanoic acid	0.002	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	0.002	NSL	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid	0.0004	NSL	**0.0009**	<0.0004	<0.0004	**0.0008**	<0.0004	<0.0004	**0.0009**	<0.0004
Perfluoroheptanoic acid	0.0004	NSL	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Perfluorooctanoic acid - PFOA	0.0002	10	**0.001**	**0.0002**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**
Perfluorononanoic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid	0.005	NSL	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4:2 FTS	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 FTS	0.0004	NSL	**0.0069**	**0.0006**	<0.0004	**0.01**	**0.002**	<0.0004	**0.01**	<0.0004
8:2 FTS	0.0004	NSL	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
10:2 FTS	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfon amide	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf-amid oacetic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EtPerfluorooctanesulf-amid oacetic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Positive PFHxS & PFOS	0.1	2	**0.002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Total Positive PFOS & PFOA	0.1	NSL	**0.0027**	**0.0002**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**
Total Positive PFAS	0.1	NSL	**0.015**	**0.001**	**0.002**	**0.011**	**0.0022**	<0.0002	**0.011**	**0.0021**

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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TABLE Q1
SOIL QA/QC SUMMARY

			TRH C6 - C10	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	m+p-xylene	o-Xylene
PQL Envirolab SYD			25	50	100	100	0.2	0.5	1	2	1
PQL Envirolab VIC			25	50	100	100	0.2	0.5	1	2	1
Intra	TP504	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP501	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	TP521	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP503	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	TP501	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP507	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP511	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP502	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP522	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP504	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP503	0.2-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP508	0.2-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<2.0	<1.0
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Field	TB-501	-	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
Blank	22/07/25										
Field	TB-502	-	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
Blank	24/07/25										
Field	FR-SHOVEL-501	µg/L	<25	<50	<100	<100	<0.2	<0.5	<1	<2.0	<1.0
Rinsate	23/07/25										
Field	FR-SHOVEL-502	µg/L	48	<50	<100	<100	<1	<1	<1	<2	<1
Rinsate	25/07/25										
Trip	TS-501		-	-	-	-	108%	106%	107%	106%	106%
Spike	22/07/25										
Trip	TS-502		-	-	-	-	106%	103%	102%	102%	102%
Spike	24/07/25										

			Naphthalene	Acenaphthylene	Acenaph-thene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b,j+k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthra-cene	Benzo(g,h,i)perylene
PQL Envirolab SYD			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.05	0.1	0.1	0.1
PQL Envirolab VIC			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Intra	TP504	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
laboratory	SDUP501	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	TP521	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.2	0.1	0.1	0.2	0.2	<0.1	<0.1	0.1
laboratory	SDUP503	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.1	0.1	<0.1	<0.2	0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	0.2	0.15	0.1	0.08	0.15	0.15	nc	nc	0.08
	RPD %		nc	nc	nc	nc	nc	nc	0%	67%	0%	67%	67%	67%	nc	nc	67%
Intra	TP501	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
laboratory	SDUP507	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP511	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
laboratory	SDUP502	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP522	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.2	0.1	<0.1	<0.1	<0.1
laboratory	SDUP504	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	0.08	0.08	nc	nc	nc	0.06	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	67%	67%	nc	nc	nc	120%	nc	nc	nc
Inter	TP503	0.2-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
laboratory	SDUP508	0.2-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Field	TB-501	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
Blank	22/07/25																
Field	TB-502	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
Blank	24/07/25																
Field	FR-SHOVEL-501	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1
Rinsate	23/07/25																
Field	FR-SHOVEL-502	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1
Rinsate	25/07/25																
Trip	TS-501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	22/07/25																
Trip	TS-502		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	24/07/25																

			HCB	alpha- BHC	gamma- BHC	beta- BHC	Heptachlor	delta- BHC	Aldrin	Heptachlor Epoxide	Gamma- Chlordane	alpha- chlordane	Endosulfan I	pp- DDE	Dieldrin	Endrin	pp- DDD	Endosulfan II	pp- DDT	Endrin Aldehyde	Endosulfan Sulphate	Methoxychlor
PQL Envirolab SYD			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PQL Envirolab VIC			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Intra	TP504	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
laboratory	SDUP501	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	TP521	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
laboratory	SDUP503	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	TP501	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
laboratory	SDUP507	0-0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP511	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
laboratory	SDUP502	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP522	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
laboratory	SDUP504	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP503	0.2-0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
laboratory	SDUP508	0.2-0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Field	TB-501	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Blank	22/07/25																					
Field	TB-502	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Blank	24/07/25																					
Field	FR-SHOVEL-501	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Rinsate	23/07/25																					
Field	FR-SHOVEL-502	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rinsate	25/07/25																					
Trip	TS-501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	22/07/25																					
Trip	TS-502		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	24/07/25																					

			Azinphos-methyl (Guthion)	Bromophos-ethyl	Chlorpyriphos	Chlorpyriphos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel	Total PCBS	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
PQL Envirolab SYD			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	4	0.4	1	1	1	0.1	1	1
PQL Envirolab VIC			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	4	0.4	1	1	1	0.1	1	1
Intra	TP504	0-0.1	<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	14	<0.4	12	22	22	<0.1	18	69
laboratory	SDUP501	0-0.1	<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	12	<0.4	15	26	25	<0.1	22	87
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	13	nc	13.5	24	23.5	nc	20	78
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	15%	nc	22%	17%	13%	nc	20%	23%
Intra	TP521	0-0.1	<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	4	<0.4	15	44	46	<0.1	25	61
laboratory	SDUP503	0-0.1	<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	6	<0.4	14	41	45	<0.1	16	54
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	5	nc	14.5	42.5	45.5	nc	20.5	57.5
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	40%	nc	7%	7%	2%	nc	44%	12%
Intra	TP501	0-0.1	<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	10	<0.4	17	12	24	<0.1	4	16
laboratory	SDUP507	0-0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	<0.4	17	12	24	<0.1	4	16
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	10.5	nc	17	12	24	nc	4	16
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	10%	nc	0%	0%	0%	nc	0%	0%
Inter	TP511	0-0.1	<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	7	<0.4	17	18	18	<0.1	7	27
laboratory	SDUP502	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	7.5	<0.4	19	28	29	<0.1	13	53
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	7.25	nc	18	23	23.5	nc	10	40
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	7%	nc	11%	43%	47%	nc	60%	65%
Inter	TP522	0-0.1	<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	4	<0.4	12	19	27	<0.1	6	34
laboratory	SDUP504	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	4.6	<0.4	16	21	30	<0.1	7.5	41
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	4.3	nc	14	20	28.5	nc	6.75	37.5
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	14%	nc	29%	10%	11%	nc	22%	19%
Inter	TP503	0.2-0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6	<0.4	10	25	25	<0.1	24	97
laboratory	SDUP508	0.2-0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.4	<0.40	11	28	23	<0.10	17	76
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	6.2	nc	10.5	26.5	24	nc	20.5	86.5
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	6%	nc	10%	11%	8%	nc	34%	24%
Field	TB-501	-	<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	<4	<0.4	3	<1	4	<0.1	<1	3
Blank	22/07/25																						
Field	TB-502	-	<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	<4	<0.4	3	<1	4	<0.1	<1	3
Blank	24/07/25																						
Field	FR-SHOVEL-501	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	4.6	<0.40	16	21	30	<0.10	7.5	41
Rinsate	23/07/25																						
Field	FR-SHOVEL-502	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.05	<0.01	<0.01	0.3	<0.03	<0.0005	<0.02	0.03
Rinsate	25/07/25																						
Trip	TS-501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	22/07/25																						
Trip	TS-502		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	24/07/25																						

Result outside of QA/QC acceptance criteria

Rinsate metals results in mg/L

TABLE Q2
SUMMARY OF PFAS FIELD QA/QC IN SOIL
Units are µg/Kg unless stated otherwise.

			Perfluorobutanesulfonic acid	Perfluoropentanesulfonic acid	Perfluorohexanesulfonic acid - PFHxS	Perfluoroheptanesulfonic acid	Perfluorooctanesulfonic acid PFOS	Perfluorodecanesulfonic acid	Perfluorobutanoic acid	Perfluoropentanoic acid	Perfluorohexanoic acid	Perfluoroheptanoic acid	Perfluorooctanoic acid PFOA	Perfluorononanoic acid	Perfluorodecanoic acid	Perfluoroundecanoic acid	Perfluorododecanoic acid	Perfluorotridecanoic acid	Perfluorotetradecanoic acid	4:2 FTS	6:2 FTS	8:2 FTS	10:2 FTS	Perfluorooctane sulfonamide	N-Methyl perfluorooctane sulfonamide	N-Ethyl perfluorooctanesulfon amide	N-Me perfluorooctanesulfonamid oethanol	N-Et perfluorooctanesulfonamid oethanol	MePerfluorooctanesulf-amid oacetic acid	EtPerfluorooctanesulf-amid oacetic acid	Total Positive PFHxS & PFOS	Total Positive PFOS & PFOA	Total Positive PFAS
PQL Envirolab			*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.2*	*0.2*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*	*0.5*	*0.5*	*0.5*	*0.5*	*5*	*0.1*	*0.1*	*0.1*	*0.1*	*1*	*1*	*1*	*1*	*5*	*0.2*	*0.2*	*0.1*	*0.1*	*0.1*
PQL Envirolab VIC			*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.2*	*0.2*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*	*0.5*	*0.5*	*0.5*	*0.5*	*5*	*0.1*	*0.1*	*0.1*	*0.1*	*1*	*1*	*1*	*1*	*5*	*0.2*	*0.2*	*0.1*	*0.1*	*0.1*
Intra laboratory duplicate	TP504	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	0.2	0.2	0.3	0.5	1.1	0.2	2	<0.5	2	<0.5	<5	<0.1	<0.1	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	1.1	5.9
	SDUP501	0-0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.2	<0.2	0.2	0.3	0.4	1.1	0.3	2	<0.5	2	<0.5	<5	<0.1	<0.1	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	0.1	1.2	6.9
	MEAN		nc	nc	nc	nc	0.075	nc	0.15	0.2	0.3	0.45	1.1	0.25	2	nc	2	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.075	1.15	6.4
	RPD %		nc	nc	nc	nc	67%	nc	67%	0%	0%	22%	0%	40%	0%	nc	0%	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	67%	9%	16%
Inter laboratory duplicate	TP511	0-0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.2	<0.2	<0.2	<0.1	0.1	0.3	0.1	0.8	<0.5	0.7	<0.5	<5	<0.1	<0.1	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	0.2	0.5	2.2
	SDUP502	0-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.1	<0.1	0.22	<0.1	0.66	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	0.22	0.88
	MEAN		nc	nc	nc	nc	0.125	nc	nc	nc	nc	0.075	0.26	0.075	0.73	nc	0.475	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.125	0.36	1.54
	RPD %		nc	nc	nc	nc	120%	nc	nc	nc	nc	67%	31%	67%	19%	nc	95%	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	120%	78%	86%
Field Blank	TB-501 22/07/2025	-	<0.1	-	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.2	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1
Field Blank	TB-502 24/07/2025	-	<0.1	-	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.2	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1
Field Rinsate	FR-SHOVEL-501 23/07/2025	µg/L	<0.01	-	<0.01	-	<0.01	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01
Field Rinsate	FR-SHOVEL-502 25/07/2025	µg/L	<0.01	-	<0.01	-	<0.01	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01

Result outside of QA/QC acceptance criteria Value

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TABLE Q3
GROUNDWATER QA/QC SUMMARY

		TRH C6 - C10	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	m+p-xylene	o-Xylene	Naphthalene	Acenaphthylene	Acenaph-thene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b,j+k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthra-cene	Benzo(g,h,i)perylene	Arsenic	Cadmium	Chromium VI	Copper	Lead	Mercury	Nickel	Zinc
	PQL Envirolab SYD	*10*	*50*	*100*	*100*	*1*	*1*	*1*	*2*	*1*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*	*1*	*0.1*	*1*	*1*	*1*	*0.05*	*1*	*1*
	PQL Envirolab VIC	*10*	*50*	*100*	*100*	*1*	*1*	*1*	*2*	*1*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*	*1*	*0.1*	*1*	*1*	*1*	*0.05*	*1*	*1*
Intra laboratory duplicate	MW102	<10	<50	<100	<100	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	2	<0.1	<1	<1	<1	<0.05	23	21
	WDUP1 (MW102)	<10	<50	<100	<100	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	3	0.1	<1	<1	<1	<0.05	24	22
	MEAN	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	2.5	0.075	nc	nc	nc	nc	23.5	21.5
	RPD %	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	40%	67%	nc	nc	nc	nc	4%	5%
Intra laboratory duplicate	MW6	<10	<50	<100	<100	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<1	<1	<1	<0.05	21	34
	WDUP2 (MW6)	<10	<50	<100	<100	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<1	<1	<1	<0.05	18	30
	MEAN	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	19.5	32
	RPD %	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	15%	13%
Field Blank	TB-1 29/07/2025	<10	<50	<100	<100	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<1	<1	<1	<0.05	<1	<1
Field Rinsate	FR-DIP-1 29/07/2025	<10	200	<100	<100	<1	<1	<1	<2	<1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<1	<1	<1	<0.05	<1	3
Trip Spike	TS-1 29/07/2025	-	-	-	-	117%	114%	113%	108%	112%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Result outside of QA/QC acceptance criteria Value

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TABLE Q4
SUMMARY OF PFAS FIELD QA/QC IN GROUNDWATER
Units are µg/L unless stated otherwise.

		Perfluorobutanesulfonic acid	Perfluoropentanesulfonic acid	Perfluorohexanesulfonic acid - PFHxS	Perfluoroheptanesulfonic acid	Perfluorooctanesulfonic acid PFOS	Perfluorodecanesulfonic acid	Perfluorobutanoic acid	Perfluoropentanoic acid	Perfluorohexanoic acid	Perfluoroheptanoic acid	Perfluorooctanoic acid PFOA	Perfluorononanoic acid	Perfluorodecanoic acid	Perfluoroundecanoic acid	Perfluorododecanoic acid	Perfluorotridecanoic acid	Perfluorotetradecanoic acid	4:2 FTS	6:2 FTS	8:2 FTS	10:2 FTS	Perfluorooctane sulfonamide	N-Methyl perfluorooctane sulfonamide	N-Ethyl perfluorooctanesulfon amide	N-Me perfluorooctanesulfonamid oethanol	N-Et perfluorooctanesulfonamid oethanol	MePerfluorooctanesulf-amid oacetic acid	EtPerfluorooctanesulf-amid oacetic acid	Total Positive PFHxS & PFOS	Total Positive PFOS & PFOA	Total Positive PFAS
PQL Envirolab		*0.0004*	*0.001*	*0.0002*	*0.001*	*0.0002*	*0.002*	*0.02*	*0.002*	*0.0004*	*0.0004*	*0.0002*	*0.001*	*0.002*	*0.002*	*0.005*	*0.01*	*0.05*	*0.001*	*0.0004*	*0.0004*	*0.002*	*0.01*	*0.05*	*0.1*	*0.05*	*0.5*	*0.002*	*0.002*	*0.0002*	*0.0002*	*0.1*
PQL Envirolab VIC		*0.0004*	*0.001*	*0.0002*	*0.001*	*0.0002*	*0.002*	*0.02*	*0.002*	*0.0004*	*0.0004*	*0.0002*	*0.001*	*0.002*	*0.002*	*0.005*	*0.01*	*0.05*	*0.001*	*0.0004*	*0.0004*	*0.002*	*0.01*	*0.05*	*0.1*	*0.05*	*0.5*	*0.002*	*0.002*	*0.0002*	*0.0002*	*0.1*
Intra laboratory duplicate	MW102	<0.0004	<0.001	<0.0002	<0.001	<0.0002	<0.002	<0.02	<0.002	0.0008	<0.0004	<0.0002	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	0.01	<0.0004	<0.002	<0.01	<0.05	<0.1	<0.05	<0.5	<0.002	<0.002	<0.0002	<0.0002	0.011
	WDUP1 (MW102)	<0.0004	<0.001	<0.0002	<0.001	<0.0002	<0.002	<0.02	<0.002	0.0009	<0.0004	<0.0002	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	0.01	<0.0004	<0.002	<0.01	<0.05	<0.1	<0.05	<0.5	<0.002	<0.002	<0.0002	<0.0002	0.011
	MEAN	nc	nc	nc	nc	nc	nc	nc	nc	0.00085	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.01	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.011
	RPD %	nc	nc	nc	nc	nc	nc	nc	nc	12%	nc	nc	nc	nc	nc	nc	nc	nc	nc	0%	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0%
Intra laboratory duplicate	MW6	0.002	<0.001	<0.0002	<0.001	<0.0002	<0.002	<0.02	<0.002	<0.0004	<0.0004	0.0003	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	<0.0004	<0.0004	<0.002	<0.01	<0.05	<0.1	<0.05	<0.5	<0.002	<0.002	<0.0002	0.0003	0.002
	WDUP2 (MW6)	0.002	<0.001	<0.0002	<0.001	<0.0002	<0.002	<0.02	<0.002	<0.0004	<0.0004	0.0003	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	<0.0004	<0.0004	<0.002	<0.01	<0.05	<0.1	<0.05	<0.5	<0.002	<0.002	<0.0002	0.0003	0.0021
	MEAN	0.002	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.0003	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.0003	0.00205
	RPD %	0%	nc	nc	nc	nc	nc	nc	nc	nc	nc	0%	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0%	5%

Result outside of QA/QC acceptance criteria Value

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Appendix D: Borehole / Test pit Logs

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BOREHOLE LOG

Borehole No. 1

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: 35128LF **Method:** SPIRAL AUGER **R.L. Surface:** 57.01 m

Date: 1/6/22 **Datum:** AHD

Plant Type: JK308 **Logged/Checked By:** S.A./O.F.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	RL (m AHD)	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
DRY ON COMPLETION OF AUGERING										FILL: Silty clay, medium to high plasticity, grey brown and orange brown, trace of fine to medium grained igneous gravel, and root fibres.	w~PL			GRASS COVER
				■	N = 8 3,3,5									
						56	1		CH	Silty CLAY: high plasticity, orange brown and brown.	w~PL	Hd	450	RESIDUAL
									-	Extremely Weathered siltstone: silty CLAY, low plasticity, orange brown and brown.	XW	Hd	>600	ASHFIELD SHALE
				■	N=SPT 5/ 50mm REFUSAL						MW	L		VERY LOW 'TC' BIT RESISTANCE
						55	2			SILTSTONE: grey and orange brown, with occasional iron indurated bands.				LOW RESISTANCE
												M		MODERATE RESISTANCE
						54	3			REFER TO CORED BOREHOLE LOG				GROUNDWATER MONITORING WELL INSTALLED TO 7.3m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 2.8m TO 7.3m. CASING 0m TO 3.8m. 2mm SAND FILTER PACK 2.4m TO 7.3m. BENTONITE SEAL 1.5m TO 2.4m. BACKFILLED WITH CUTTINGS TO THE SURFACE.
						53	4							
						52	5							
						51	6							

JK 9.02.4 LIB.GLB Log JK AUGERHOLE - MASTER 35128LF ROUSEHILL.GPJ <<DrawingFile>> 11/07/2022 16:15 10.01.00.01 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.02.4 2019-05-31 Prj: JK 9.01.0 2018-03-20

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CORED BOREHOLE LOG

Borehole No. 1 **2 / 2**

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: 35128LF **Core Size:** NMLC **R.L. Surface:** 57.01 m

Date: 1/6/22 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK308 **Bearing:** N/A **Logged/Checked By:** S.A./O.F.

Water Loss\Level	Barrel Lift	RL (m AHD)	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$ (VL -0.1, L -0.3, M -1, H -3, VH -10, EH)	DEFECT DETAILS: SPACING (mm) (600, 200, 60, 20)	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
					START CORING AT 2.75m						
					NO CORE 0.25m						
	100% RETURN	54	3		SILTSTONE: grey and orange brown, bedded at 0-2°.	MW	M - H	0.50 0.90 0.50		(3.04m) Be, 1°, P, S, Clay Vn (3.08m) Be, 1°, P, S, Clay Vn (3.19m) CS, 0°, 43 mm.t (3.25m) Be, 1°, P, S, Clay Vn (3.32m) J, 50°, P, S, Cn (3.49m) Be, 0°, P, S, Clay Vn (3.51m) Be, 1°, P, S, Clay FILLED, 2 mm.t (3.59m) CS, 0°, 4 mm.t (3.61m) XWS, 0°, 6 mm.t (3.63m) Ji, 0 - 40°, Ir (3.81m) Ji, 10°, P (3.82m) Ji, 10°, P (3.85m) Ji, 5°, P (3.86m) Ji, 25°, P (3.87m) Ji, 30°, P (3.93m) Ji, 80°, P (4.26m) Be, 1°, P, S, Cn (4.38m) Be, 2°, P, S, Clay Vn (4.48m) Be, 2°, P, S, Clay Vn (4.48m) Be, 1°, P, S, Clay Vn (4.53m) XWS, 1°, 5 mm.t (4.62m) Be, 0°, P, S, Cn (4.71m) XWS, 2°, 3 mm.t	Ashfield Shale
		53	4								
	ON 16/6/22	52	5		SILTSTONE: grey, bedded sub-horizontally at 0-1°.	FR	H	1.5 2.5 2.0		(5.31m) XWS, 1°, 3 mm.t	
	70% RETURN	51	6					1.5 1.9		(5.80m) Be, 2°, P, S, Cn	
		50	7					1.9			
		49	8		END OF BOREHOLE AT 7.30 m						

JK 9.02.4 LIB:GLB Log JK CORED BOREHOLE - MASTER 35128LF ROUSEHILL.GPJ <<DrawingFile>> 11/07/2022 16:15 10.01.00.01 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.02.4 2019-05-31 Prj: JK 9.01.0 2018-03-20

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FRACTURES NOT MARKED ARE CONSIDERED TO BE DRILLING AND HANDLING BREAKS

JKGeotechnics

BOREHOLE LOG

Borehole No. 4

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: 35128LF **Method:** SPIRAL AUGER **R.L. Surface:** 53.96 m

Date: 2/6/22 **Datum:** AHD

Plant Type: JK308 **Logged/Checked By:** S.A./O.F.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	RL (m AHD)	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
DRY ON COMPLETION OF AUGERING										FILL: Silty clay, medium to high plasticity, grey brown, trace of root fibres.	w>PL			GRASS COVER
					N = 10 4,5,5				CH	Silty CLAY: high plasticity, orange brown and grey.	w~PL	Hd	400 480	RESIDUAL
						53	1		-	SILTSTONE: grey and orange brown, with occasional iron indurated bands.	SW	M / M - H		ASHFIELD SHALE LOW 'TC' BIT RESISTANCE MODERATE RESISTANCE 'TC' BIT REFUSAL
						52	2			REFER TO CORED BOREHOLE LOG				GROUNDWATER MONITORING WELL INSTALLED TO 7.24m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 2.76m TO 7.24m. CASING 0m TO 2.76m. 2mm SAND FILTER PACK 0.8m TO 7.24m. BENTONITE SEAL 0.5m TO 0.8m. BACKFILLED WITH SAND TO THE SURFACE.
						51	3							
						50	4							
						49	5							
						48	6							
						47								

JK 9.02.4 LIB:GLB Log JK AUGERHOLE - MASTER 35128LF ROUSEHILL.GPJ <<DrawingFile>> 11/07/2022 16:17 10.01.00.01 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.02.4 2019-05-31 Prj: JK 9.01.0 2018-03-20

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CORED BOREHOLE LOG

Borehole No. 4 **2 / 2**

Client: NSW HEALTH INFRASTRUCTURE

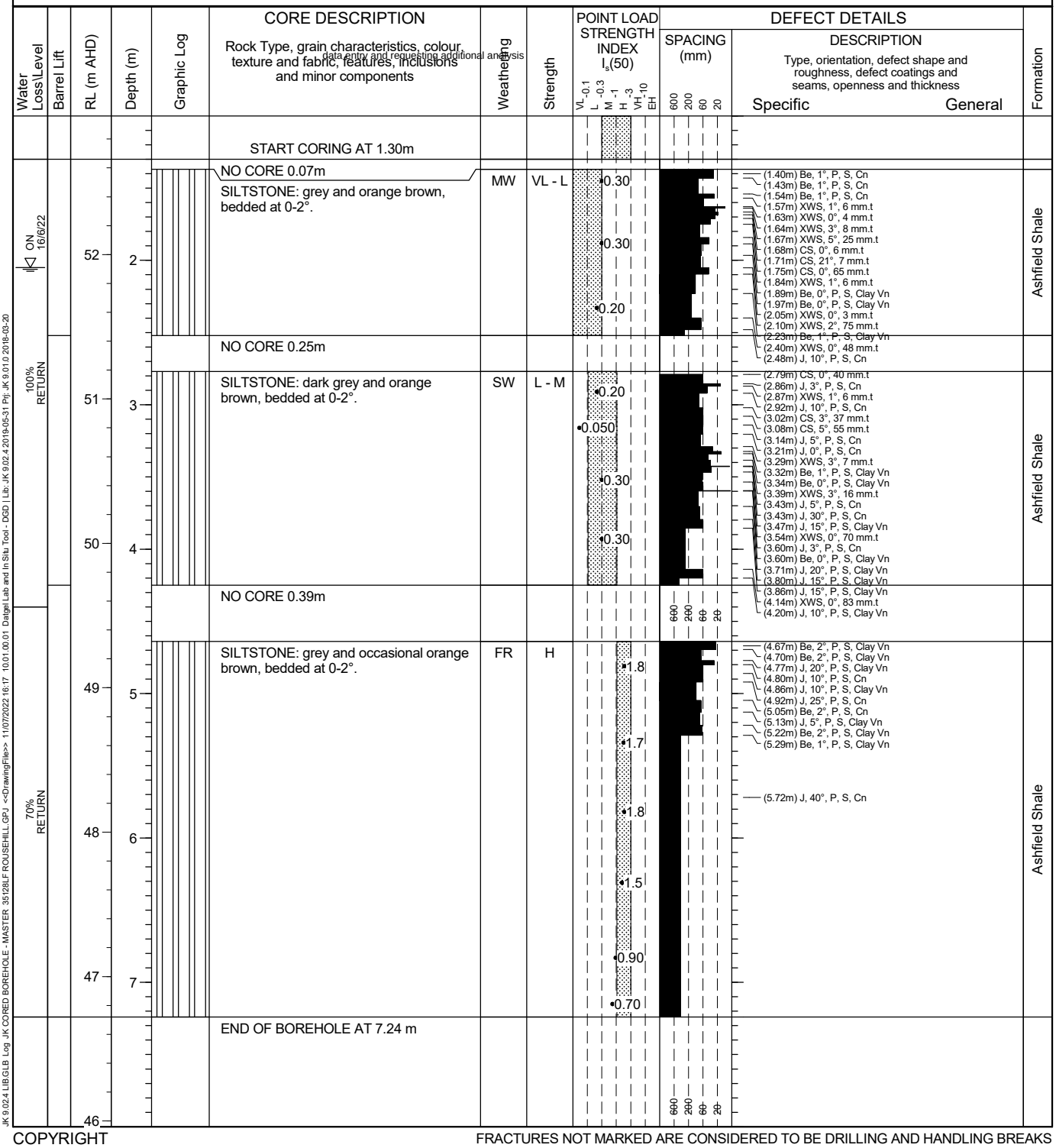
Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: 35128LF **Core Size:** NMLC **R.L. Surface:** 53.96 m

Date: 2/6/22 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK308 **Bearing:** N/A **Logged/Checked By:** S.A./O.F.



JK 9.02.4 LIB GLB Log JK CORED BOREHOLE - MASTER 35128LF ROUSEHILL.GPJ <<DrawingFile>> 11/07/2022 16:17 10.01.00.01 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.02.4 2019-05-31 Prj: JK 9.01.0 2018-03-20

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BOREHOLE LOG

Borehole No. 6

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: 35128LF **Method:** SPIRAL AUGER **R.L. Surface:** 50.23 m

Date: 3/6/22 **Datum:** AHD

Plant Type: JK308 **Logged/Checked By:** S.A./B.S./O.F.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	RL (m AHD)	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
DRY ON COMPLETION OF AUGERING						50				FILL: Silty clay, medium plasticity, grey brown, trace of root fibres.	w<PL			
					N = 8 3,3,5				CH	Silty CLAY: high plasticity, orange brown and brown.	w<PL	Hd	420 430	RESIDUAL
						49	1							
					N > 18 3,8,10/ 100mm REFUSAL				-	Extremely Weathered siltstone: silty CLAY, medium to high plasticity, grey and orange brown, with occasional ironstone bands.	XW	Hd		ASHFIELD SHALE
ON 16/6/22						48	2							
										SILTSTONE: grey and orange brown, with occasional ironstone bands.	DW	L - M		LOW TO MODERATE 'TC' BIT RESISTANCE
						47	3							HIGH RESISTANCE
										REFER TO CORED BOREHOLE LOG				GROUNDWATER MONITORING WELL INSTALLED TO 8.87m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 2.87m TO 8.87m. CASING 0m TO 2.87m. 2mm SAND FILTER PACK 2.4m TO 8.57m. BENTONITE SEAL 0m TO 2.4m.
						46	4							
						45	5							
						44	6							

JK 9.02.4 LIB.GLB Log JK AUGERHOLE - MASTER 35128LF ROUSEHILL.GPJ <<DrawingFile>> 11/07/2022 16:18 10.01.00.01 Datgel Lab and In Situ Tool - DGD | Lib: JK 9.02.4 2019-05-31 Prj: JK 9.01.0 2018-03-20

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CORED BOREHOLE LOG

Borehole No. 6

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: 35128LF **Core Size:** NMLC **R.L. Surface:** 50.23 m

Date: 3/6/22 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK308 **Bearing:** N/A **Logged/Checked By:** S.A./B.S./O.F.

Water Loss\Level	Barrel Lift	RL (m AHD)	Depth (m)	Graphic Log	CORE DESCRIPTION: Rock Type, grain characteristics, colour, texture and fabric, features, inclusions and minor components	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_s(50)$	DEFECT DETAILS: SPACING (mm)	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
		47			START CORING AT 3.30m						
100% RETURN					NO CORE 0.57m						
		46	4		SILTSTONE: dark grey, with iron indurated bands, distinctly bedded at 0-5°.	MW	M	0.40, 0.50, 0.70, 0.80, 0.70, 0.30		(3.89m) Be, 0°, P, R, Fe Cn (3.95m) XWS, 0°, 50 mm.t (4.02m) J, 40°, P, S, Cn (4.04m) Be, 0°, P, S, Clay Ct (4.05m) Be, 0°, P, S, Clay Ct (4.06m) Be, 0°, P, S, Clay Ct (4.11m) Cr, 0°, 17 mm.t (4.25m) J, 35°, P, S, Cn (4.34m) J, 30°, P, S, Clay Vn (4.41m) Be, 0°, P, S, Clay Ct (4.44m) Be, 0°, P, S, Clay FILLED, 2 mm.t (4.50m) J, 15°, P, S, Cn (4.52m) J x 2, 10 - 30°, Un, S, Fe Sn (4.69m) Ji, 10 - 30°, Un (4.72m) Ji, 10 - 50°, Ir (4.75m) J, 25°, Un, S, Fe Sn (4.79m) J, 20°, P, S, Clay Vn (4.81m) J, 20°, P, R, Fe Sn (4.82-5.00m) Highly fractured, numerous J, 15-90°, Un/Ir, S, Fe, Sn/Cn & Be, 0°, P, S, Cn/Fe, Sn (5.01m) Be, 0°, P, R, Clay FILLED, 2 mm.t (5.06m) J, 10 - 15°, Ir, S, Cn (5.14-5.18m) 3 x J & 1 x Be (5.22m) J, 15°, P, S, Cn (5.27m) J, 40°, P, S, Cn (5.28m) Cr, 0°, 7 mm.t (5.37m) J, 40°, C, S, Cn (5.43m) Be, 0°, P, R, Clay Ct (5.45m) XWS, 0°, 23 mm.t (5.51m) J, 25°, P, S, Cn (5.55m) Be, 0°, C, R, Cn (5.64m) Be, 0°, P, S, Cn (5.66m) Be, 5°, P, S, Cn (5.70m) Be, 0°, P, S, Cn (5.72m) J, 15°, P, S, Cn (5.74m) Be, 0°, P, S, Fe Sn (5.84m) Be, 0°, P, S, Cn (6.05m) Be, 0°, P, S, Clay Ct (6.06m) Be, 0°, P, S, Clay Ct (6.07m) Be, 0°, P, S, Clay Ct (6.08m) J, 15°, Un, S, Fe Sn (6.24m) J, 35°, P, S, Cn (6.32m) Be, 5°, P, R, Fe Sn (6.91m) J, 30°, P, R, Fe Sn (7.09m) J, 30°, P, R, Fe Sn (7.29m) Be, 0°, P, R, Clay Ct (7.36m) Be x 2, 0°, P, R, Clay FILLED, 2 mm.t (7.49m) Be, 0°, P, R, Clay FILLED, 2 mm.t (7.79m) Be, 0°, P, R, Clay Ct	Ashfield Shale
70% RETURN		45	5								
		44	6								
					SANDSTONE: fine grained, grey, with occasional iron indurated bands, distinctly bedded at 0-5°.	SW	H - VH	1.4			
		43	7					1.2			
					SANDSTONE: fine grained, grey, with iron indurated bands and siltstone bands, distinctly bedded at 0-10°.			3.9			
		42	8		as above, but without iron indurated bands and with occasional carbonaceous lenses.			3.4, 2.6			
		41	9		END OF BOREHOLE AT 8.87 m						

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Log No. **BH/MW102** **1/2**

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: E35128B **Method:** SPIRAL AUGER **R.L. Surface:** 50.112m

Date: 8/7/24 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** C.B. & V.R./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
							0			FILL: Silty clay, low to medium plasticity, dark brown, trace of igneous gravel and root fibres.	w≈PL			GRASS COVER
						N = 14 6,6,8			CI-CH	Silty CLAY: medium to high plasticity, red brown.	w≈PL			RESIDUAL
▼ ON 16/7/24							1		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey.	XW			ASHFIELD SHALE
							2							
										SILTSTONE: fine grained, light grey.	DW			LOW STRENGTH
							3							
											SW			HIGH RESISTANCE
							4							
							5							
▶									-	SANDSTONE: fine to medium grained, light grey, with dark grey siltstone bands, bedded at 0-10°.	FR			COMMENCE CORING AT 5.53m
							6							
							7							

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Log No. **BH/MW102** **2/2**

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: E35128B **Method:** SPIRAL AUGER **R.L. Surface:** 50.112m

Date: 8/7/24 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** C.B. & V.R./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
			■	■			8		-	SILTSTONE: fine grained, dark grey, bedded at 0-5˚.	FR			
									-	SANDSTONE: fine to medium grained, light grey, with dark grey siltstone laminae, bedded at 0-10˚.				
							9			END OF BOREHOLE AT 8.53m				GROUNDWATER MONITORING WELL INSTALLED TO 8.53m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 3.0m TO 8.53m. CASING 0m TO 3.0m. 2mm SAND FILTER PACK 2.6m TO 8.53m. BENTONITE SEAL 0m TO 2.6m.
							10							
							11							
							12							
							13							
							14							

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Log No. **BH/MW103** **1/2**

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: E35128B **Method:** SPIRAL AUGER **R.L. Surface:** 55.05m

Date: 9/7/24 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** C.B. & V.R./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, medium to high plasticity, dark brown, trace of igneous gravel and root fibres.	w≈PL			GRASS COVER
									CI-CH	Silty CLAY: medium to high plasticity, light brown.	w≈PL			RESIDUAL
						N = 16 4,8,8	1			as above, but light grey mottled orange.	w≈PL			
									-	Extremely Weathered siltstone: silty CLAY, medium to high plasticity, light brown and light grey.	XW			ASHFIELD SHALE
						N > 7 8,7/50mm REFUSAL	2			SILTSTONE: fine grained, dark grey.	SW			MODERATE RESISTANCE
							3							
							4							
							5							
							6							HIGH RESISTANCE
▼ ON 16/7/24							7							

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Log No. **BH/MW103** **2/2**

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: E35128B **Method:** SPIRAL AUGER **R.L. Surface:** 55.05m

Date: 9/7/24 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** C.B. & V.R./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
		■		■						SILTSTONE: fine grained, dark grey.	SW			
							8			END OF BOREHOLE AT 8.0m				GROUNDWATER MONITORING WELL INSTALLED TO 8.0m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 3.0m TO 8.0m. CASING 0m TO 3.0m. 2mm SAND FILTER PACK 2.58m TO 8.0m. BENTONITE SEAL 0m TO 2.58m.
							9							
							10							
							11							
							12							
							13							
							14							

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Log No. **BH/MW109** **1/2**

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: E35128B **Method:** SPIRAL AUGER **R.L. Surface:** 51.079m

Date: 10/7/24 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** C.B. & V.R./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, medium to high plasticity, dark brown, trace of root fibres.	w≈PL			GRASS COVER
									CI-CH	Silty CLAY: medium to high plasticity, light grey and orange brown.	w≈PL			RESIDUAL
						N = 24 13,12,12			-	Extremely Weathered siltstone: silty CLAY, medium to high plasticity, light grey and orange brown.	XW			ASHFIELD SHALE
							1							
						N > 24 13,14, 10/ 100mm REFUSAL				SILTSTONE: fine grained, dark grey, with iron indurated bands and light grey sandstone laminae, bedded at 0-5°.	SW			
							2							MODERATE RESISTANCE
▼ ON 16/7/24							3							
							4							
							5							
							6							
							7							COMMENCE CORING AT 6.6m

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Log No. **BH/MW109** **2/2**

Client: NSW HEALTH INFRASTRUCTURE

Project: PROPOSED ROUSE HILL HOSPITAL

Location: CNR WINDSOR ROAD AND COMMERCIAL ROAD, ROUSE HILL, NSW

Job No.: E35128B **Method:** SPIRAL AUGER **R.L. Surface:** 51.079m

Date: 10/7/24 **Datum:** AHD

Plant Type: JK305 **Logged/Checked by:** C.B. & V.R./T.H.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
				■			8			SILTSTONE: fine grained, dark grey, with iron indurated bands and light grey sandstone laminae, bedded at 0-5°.	SW			
							9							
							10			END OF BOREHOLE AT 9.38m				GROUNDWATER MONITORING WELL INSTALLED TO 8.0m. CLASS 18 MACHINE SLOTTED 50mm DIA. OVC STANDPIPE 3.0m TO 8.0m. CASING 0m TO 3.0m. 2mm SAND FILTER PACK 2.5m TO 8.0m. BENTONITE SEAL 0m TO 2.5m.
							11							
							12							
							13							
							14							

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Log No. TP501 **1/1**

SDUP507: 0-0.1m

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 55.80m

Date: 25/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■		■		0			FILL: Silty clay, medium plasticity, brown, with root fibres, trace of ironstone gravel.	w<PL			GRASS COVER SCREEN: 12.05kg 0-0.2m, NO FCF
	■	■							CI-CH	Silty CLAY: medium to high plasticity, red brown and orange brown, trace of root fibres.	w<PL			RESIDUAL
	■	■					0.5		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands.	XW			
										END OF TEST PIT AT 0.6m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP502** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 54.58m

Date: 22/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty gravel, medium to coarse grained, light grey and brown, with igneous, siltstone and ironstone gravel, trace of root fibres.	D			GRAVEL COVER SCREEN: 10.40kg 0-0.1m, NO FCF
										FILL: Silty clay, medium plasticity, brown, with ironstone and siltstone gravel, trace of igneous gravel and concrete fragments.	w<PL			SCREEN: 10.70kg 0.1-0.2m, NO FCF SCREEN: 10.45kg 0.2-0.5m, NO FCF SCREEN: 11.35kg 0.5-1.0m, NO FCF
							0.5							
							1		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey.	XW			
										END OF TEST PIT AT 1.3m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. TP503
1/1

SDUP508: 0.2-0.3m

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 56.48m

Date: 25/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■	■			0			FILL: Silty clay, medium plasticity, brown, with ironstone and siltstone gravel, and root fibres.	w<PL			GRASS COVER
	■	■								FILL: Silty clay, medium to high plasticity, grey, trace of ironstone and siltstone gravel, ash and root fibres.	w<PL			SCREEN: 11.20kg 0-0.1m, NO FCF
							0.5		CI	Silty CLAY: medium plasticity, brown and orange brown, trace of ironstone gravel and root fibres.	w<PL			SCREEN: 10.50kg 0.1-0.5m, NO FCF RESIDUAL
	■	■								as above, but red brown.	w<PL			
							1		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey, with ironstone gravel.	XW			
										END OF TEST PIT AT 1.3m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. TP504 **1/1**

SDUP501: 0-0.1m

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 54.64m

Date: 22/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■	■	■		0			FILL: Silty clay, medium to high plasticity, brown, with ironstone and igneous gravel, and root fibres, trace of plastic fragments.	w<PL			GRASS COVER SCREEN: 11.75kg 0-0.1m, NO FCF SCREEN: 10.05kg 0.1-0.4m, NO FCF
							0.5		CI-CH	Silty CLAY: medium to high plasticity, red brown mottled light grey, with siltstone bands.				RESIDUAL
										END OF TEST PIT AT 0.7m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP505** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 52.92m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, low to medium plasticity, brown, with root fibres, trace of ironstone, igneous and sandstone gravel, and geofabric.	w<PL			GRASS COVER SCREEN: 10.40kg 0-0.1m, NO FCF SCREEN: 10.90kg 0.1-0.4m, NO FCF
							0.5			FILL: Silty clay, medium to high plasticity, brown and light grey, with ironstone, sandstone and siltstone gravel, trace of plastic fragments.	w<PL			SCREEN: 10.50kg 0.4-0.8m, NO FCF SCREEN: 11.90kg 0.8-1.3m, NO FCF SCREEN: 9.30kg (<10L) 1.3-1.6m, NO FCF
							1							
							1.5		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands.	XW			
							2			END OF TEST PIT AT 1.8m				
							2.5							
							3							
							3.5							

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Log No. **TP506** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 51.48m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, medium to high plasticity, brown, with root fibres, trace of igneous gravel and concrete fragments.	w<PL			GRASS COVER
											w<PL			SCREEN: 11.20kg 0-0.1m, NO FCF
							0.5			FILL: Silty clay, medium to high plasticity, light brown, with siltstone and ironstone gravel, trace of geofabric and slag.				SCREEN: 10.35kg 0.1-0.6m, NO FCF
										as above, but medium plasticity, with siltstone and ironstone gravel, trace of slag.	w≈PL			SCREEN: 8.95kg (<10L) 0.6-1.1m, NO FCF
							1							
							1.5							SCREEN: 11.45kg 1.5-1.9m, NO FCF
									-	Extremely Weathered siltstone: silty CLAY, medium to high plasticity, light grey, with ironstone bands.	XW			
							2			END OF TEST PIT AT 2.0m				REFUSAL ON INFERRED SILTSTONE BEDROCK
							2.5							
							3							
							3.5							

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Log No. **TP507** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 49.86m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■		■		0			FILL: Silty clayey gravel, fine to medium grained, ironstone and igneous, grey, trace of concrete and ceramic fragments, slag and root fibres.	D			GRASS / GRAVEL COVER
											w<PL			SCREEN: 11.00kg 0-0.2m, NO FCF
	■	■	■		■					FILL: Silty clay, high plasticity, brown mottled orange brown, with ironstone and siltstone gravel, trace of ash.				SCREEN: 10.35kg 0.2-0.5m, NO FCF
	■	■					0.5		-	Extremely Weathered siltstone: silty CLAY, medium to high plasticity, light grey, with ironstone bands, trace of root fibres.	XW			
										END OF TEST PIT AT 0.6m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. TP508 **1/1**

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Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 56.04m

Date: 25/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium plasticity, brown, trace of ironstone and siltstone gravel, and root fibres.	w<PL			GRASS COVER SCREEN: 10.20kg 0-0.1m, NO FCF SCREEN: 10.10kg 0.1-0.4m, NO FCF
	■		■				0.5		CI-CH	Silty CLAY: medium to high plasticity, red brown mottled grey, trace of ironstone and siltstone gravel, and root fibres.	w<PL			RESIDUAL
									-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey, with ironstone bands, trace of root fibres.	XW			
							1			END OF TEST PIT AT 0.9m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. TP509 **1/1**

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Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 55.00m

Date: 25/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: SIlty clay, medium to high plasticity, brown, with ironstone gravel and root fibres, trace of slag.	w<PL			GRASS COVER SCREEN: 11.30kg 0-0.2m, NO FCF
									CI-CH	Silty CLAY: medium to high plasticity, red brown mottled light grey, with ironstone and siltstone gravel, trace of root fibres.	w<PL			RESIDUAL
							0.5		-	Extremely Weathered siltstone: silty CLAY, medium to high plasticity, light grey mottled red brown.	XW			
										END OF TEST PIT AT 0.8m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP510** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 54.03m

Date: 22/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, medium to high plasticity, brown, with igneous and ironstone gravel, and root fibres, trace of concrete fragments.	w<PL			GRASS COVER SCREEN: 10.00kg 0-0.1m, NO FCF SCREEN: 11.10kg 0.1-0.5m, NO FCF
							0.5			as above, but dark brown and dark grey, with siltstone gravel, trace of ironstone gravel.	w≈PL			SCREEN: 10.55kg 0.5-1.0m, NO FCF
							1							SCREEN: 11.05kg 1.0-1.5m, NO FCF
							1.5							SCREEN: 11.05kg 1.5-2.0m, NO FCF
							2							SCREEN: 12.55kg 2.0-2.5m, NO FCF
							2.5							SCREEN: 10.30kg 2.5-2.8m, NO FCF
										END OF TEST PIT AT 2.8m				TEST PIT TERMINATED AT MAX RANGE DEPTH
							3							
							3.5							

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Log No. TP511 **1/1**

SDUP502: 0-0.1m

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 53.31m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■	■	■		0			FILL: Silty clay, low to medium plasticity, brown, with igneous gravel and root fibres, trace of ironstone gravel and concrete fragments.	w<PL			GRASS COVER
											w<PL			SCREEN: 9.30kg (<10L) 0-0.1m, NO FCF
	■		■	■	■					FILL: Silty clay, medium to high plasticity, light brown, with siltstone and sandstone gravel, trace of ash and root fibres.				SCREEN: 11.40kg 0.1-0.3m, NO FCF
	■		■				0.5		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands.	XW			SCREEN: 11.90kg 0.3-0.5m, NO FCF
										END OF TEST PIT AT 0.6m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP512** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 55.18m

Date: 25/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■	■	■		0			FILL: Silty clay, medium plasticity, brown, with root fibres, trace of ironstone and siltstone gravel, and ash.	w<PL			GRASS COVER SCREEN: 10.15kg 0-0.1m, NO FCF SCREEN: 10.10kg 0.1-0.4m, NO FCF
							0.5		CI-CH	Silty CLAY: medium to high plasticity, orange brown, trace of ironstone and siltstone gravel, and root fibres.	w<PL			RESIDUAL
	■	■							-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey, with ironstone bands.	XW			
							1			END OF TEST PIT AT 1.0m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP513** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 54.95m

Date: 22/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium plasticity, brown, with root fibres, trace of ironstone gravel.	w<PL			GRASS COVER SCREEN: 9.90kg (<10L) 0-0.1m, NO FCF
	■		■				0.5		CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel and root fibres.	w<PL			SCREEN: 10.60kg 0.1-0.4m, NO FCF RESIDUAL
										END OF TEST PIT AT 0.6m				REFUSAL ON INFERRED BEDROCK
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP514** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 54.06m

Date: 22/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■		■		0			FILL: Silty clay, medium plasticity, light brown and grey, with igneous and ironstone gravel, and root fibres.	w<PL			GRASS COVER
		■	■						CH	Silty CLAY: high plasticity, red brown, trace of ironstone gravel and root fibres.	w<PL			SCREEN: 11.10kg 0-0.1m, NO FCF
							0.5			END OF TEST PIT AT 0.5m				RESIDUAL
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP515** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 53.57m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■		■		0			FILL: Silty clay, medium to high plasticity, brown, with root fibres, trace of ironstone and igneous gravel, and ceramic fragments.	w<PL			GRASS / GRAVEL COVER
											w<PL			SCREEN: 10.40kg 0-0.1m, NO FCF
	■	■			■		0.5			FILL: Silty clay, high plasticity, red brown, with ironstone gravel, trace of slag.				SCREEN: 9.85kg (<10L) 0.1-0.6m, NO FCF
	■	■							-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey mottled red brown, with ironstone bands.	XW			
							1			END OF TEST PIT AT 0.7m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP516** **1/1**

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Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 54.21m

Date: 25/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■	■	■		0			FILL: Silty clay, medium plasticity, brown, with root fibres, trace of siltstone and ironstone gravel, and ash.	w<PL			GRASS COVER SCREEN: 10.05kg 0-0.1m, NO FCF SCREEN: 10.40kg 0.1-0.4m, NO FCF
							0.5		CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of ironstone and siltstone gravel, and root fibres.	w<PL			RESIDUAL
							1		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone gravel.	XW			
										END OF TEST PIT AT 1.2m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP517** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 54.37m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium to high plasticity, brown, with root fibres, trace of ironstone gravel.	w<PL			GRASS COVER SCREEN: 11.20kg 0-0.2m, NO FCF
	■		■				0.5		CI-CH	Silty CLAY: medium to high plasticity, red brown mottled light grey, trace of ironstone and siltstone gravel, and root fibres.	w<PL			RESIDUAL
									-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands.	XW			
										END OF TEST PIT AT 0.7m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP518** **1/1**

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Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 53.86m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium to high plasticity, brown, trace of siltstone and ironstone gravel, and root fibres.	w<PL			GRASS COVER SCREEN: 9.65kg (<10L) 0-0.2m, NO FCF
	■		■						CH	Silty CLAY: high plasticity, red brown, trace of ironstone gravel and root fibres.	w<PL			RESIDUAL
									-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey, with ironstone bands.	XW			
							0.5			END OF TEST PIT AT 0.5m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP519** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 53.25m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium to high plasticity, red brown, with ironstone gravel, trace of root fibres.	w<PL			GRASS COVER SCREEN: 10.10kg 0-0.1m, NO FCF
	■		■				-		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands, trace of root fibres.	XW			SCREEN: 9.55kg (<10L) 0.1-0.3m, NO FCF
							0.5			END OF TEST PIT AT 0.4m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP520** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 53.11m

Date: 24/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium plasticity, brown, with root fibres, trace of ironstone gravel.	w<PL			GRASS COVER SCREEN: 11.20kg 0-0.1m, NO FCF
	■		■				0.5		CI-CH	Silty CLAY: medium to high plasticity, red brown, with ash and root fibres, trace of ironstone gravel.	w<PL			SCREEN: 9.80kg (<10L) 0.1-0.3m, NO FCF RESIDUAL
							1			END OF TEST PIT AT 1.0m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. TP521 **1/1**

SDUP503: 0-0.1m

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 53.50m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty sandy clay, medium plasticity, brown, with root fibres, trace of ironstone gravel and plastic fragments.	w<PL			GRASS COVER SCREEN: 10.50kg 0-0.2m, NO FCF
									CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel and root fibres.	w<PL			RESIDUAL
	■		■				0.5		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands.	XW			
										END OF TEST PIT AT 0.7m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. TP522 **1/1**

SDUP504: 0-0.1m

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 53.18m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■	■	■		0			FILL: Silty clay, high plasticity, light brown, with root fibres.	w<PL			GRASS COVER
	■	■		■						FILL: Silty clay, medium plasticity, brown, with root fibres, trace of ironstone gravel.	w<PL			SCREEN: 7.60kg (<10L) 0-0.15m, NO FCF
														SCREEN: 11.75kg 0.15-0.4m, NO FCF
	■	■					0.5		CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel and root fibres.	w<PL			RESIDUAL
							1		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands.	XW			
										END OF TEST PIT AT 1.0m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP523** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 53.15m

Date: 23/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clayey gravel, fine to medium grained, grey, with ironstone, igneous and siltstone gravel, concrete and asphaltic concrete fragments, trace of ceramic fragments, slag and root fibres.	D			GRAVEL COVER SCREEN: 10.95kg 0-0.3m, NO FCF
	■		■						CI-CH		w<PL			RESIDUAL
							0.5			Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel and slag.				
									-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands.	XW			
							1			END OF TEST PIT AT 0.9m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP524** **1/1**

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Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 51.84m

Date: 24/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium plasticity, brown, with root fibres, trace of ironstone gravel.	w<PL			GRASS COVER SCREEN: 10.20kg 0-0.2m, NO FCF
									CI-CH	Silty CLAY: medium to high plasticity, red brown, with root fibres, trace of ironstone gravel.	w<PL			RESIDUAL
	■		■				0.5							
							1			as above, but orange brown and red brown.	w<PL			
										END OF TEST PIT AT 1.0m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP525** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 52.28m

Date: 24/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium plasticity, brown, with sandstone and ironstone gravel, and root fibres, trace of ceramic and tile fragments.	w≈PL			GRASS COVER SCREEN: 11.20kg 0-0.2m, NO FCF
									CI-CH	Silty CLAY: medium to high plasticity, red brown, with ironstone and siltstone gravel, and root fibres.	w<PL			RESIDUAL
	■		■				0.5		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands, trace of root fibres.	XW			
							1			END OF TEST PIT AT 0.9m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP526** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 52.60m

Date: 24/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■		■		0			FILL: Silty clay, medium plasticity, brown, with roots and root fibres, trace of ironstone gravel.	w≈PL			GRASS COVER SCREEN: 10.70kg 0-0.2m, NO FCF
	■	■							CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel and root fibres.	w<PL			RESIDUAL
							0.5							
	■	■							-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands and root fibres.	XW			
										END OF TEST PIT AT 0.85m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP527** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 50.53m

Date: 24/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■	■	■		0			FILL: Silty clay, medium plasticity, brown, with root fibres, trace of ironstone gravel.	w<PL			GRASS COVER SCREEN: 10.10kg 0-0.1m, NO FCF SCREEN: 10.65kg 0.1-0.6m, NO FCF
							0.5		CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel and root fibres.	w<PL			RESIDUAL
										END OF TEST PIT AT 0.8m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP528** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 51.16m

Date: 24/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium plasticity, brown, with root fibres, trace of ironstone gravel.	w<PL			GRASS COVER SCREEN: 10.40kg 0-0.1m, NO FCF
	■		■						CI	Silty CLAY: medium plasticity, brown and red brown, trace of siltstone and ironstone gravel, ash and root fibres.	w<PL			SCREEN: 9.30kg (<10L) 0.1-0.3m, NO FCF
							0.5		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands.	XW			RESIDUAL
										END OF TEST PIT AT 0.6m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. TP529 **1/1**

SDUP505: 0-0.1m

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 51.72m

Date: 24/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium plasticity, brown, with roots and root fibres, trace of ironstone gravel.	w<PL			GRASS COVER SCREEN: 10.20kg 0-0.1m, NO FCF
	■		■						CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel and root fibres.	w<PL			RESIDUAL
							0.5		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands and roots.	XW			
										END OF TEST PIT AT 0.65m				
							1							
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP530** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 49.74m

Date: 24/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	■	■	■		■		0			FILL: Silty clay, medium to high plasticity, brown, with root fibres, trace of ironstone gravel.	w<PL			GRASS COVER SCREEN: 10.30kg 0-0.2m, NO FCF
	■	■	■		■					as above, but brown and grey, with ironstone and siltstone gravel, ash and slag, trace of plastic fragments.	w≈PL			SCREEN: 11.20kg 0.2-0.7m, NO FCF
	■	■	■		■		0.5							SCREEN: 10.90kg 0.7-1.1m, NO FCF
▶	■	■	■		■		1		CI	Silty CLAY: medium plasticity, red brown, trace of ironstone gravel and ash.	w<PL			RESIDUAL
										END OF TEST PIT AT 1.3m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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Log No. **TP531** **1/1**

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 50.00m

Date: 24/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■	■	■		0			FILL: Silty clayey sand, fine to medium grained, brown, with root fibres, trace of sandstone and ironstone gravel.	M			GRASS COVER SCREEN: 13.20kg 0-0.2m, NO FCF
	■	■	■	■	■					as above, but light brown, trace of sandstone and ironstone gravel, ash and slag.	M			SCREEN: 11.70kg 0.2-0.3m, NO FCF
	■	■	■	■	■		0.5			FILL: Silty clay, medium to high plasticity, brown, trace of ironstone gravel and ash.	w<PL			SCREEN: 11.65kg 0.3-0.6m, NO FCF
	■	■	■						-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands, trace of root fibres.	XW			
							1			END OF TEST PIT AT 1.1m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOG

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Log No. TP532
1/1

SDUP506: 0-0.1m

Client: NSW HEALTH INFRASTRUCTURE

Project: DETAILED SITE INVESTIGATION

Location: CORNER OF WINDSOR ROAD AND COMMERICAL ROAD, ROUSE HILL, NSW

Job No.: E37757B **Method:** TEST PIT **R.L. Surface:** 49.58m

Date: 24/7/25 **Datum:** AHD

Plant Type: JKX **Logged/Checked by:** V.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES PFAS	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■	■	■		0			FILL: Silty clayey gravel, fine to medium grained, grey, with ironstone, igneous and siltstone gravel, and concrete fragments, trace of slag and root fibres.	D			GRAVEL COVER SCREEN: 10.75kg 0-0.1m, NO FCF SCREEN: 11.20kg 0.1-0.5m, NO FCF
	■	■	■	■	■		0.5			FILL: Silty clay, medium plasticity, brown, trace of ironstone gravel, plastic fragments and root fibres.	w<PL			SCREEN: 11.05kg 0.5-0.7m, NO FCF
	■	■	■	■	■				CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of siltstone and ironstone gravel, and ash.	w<PL			RESIDUAL
	■	■	■	■	■		1		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey, with ironstone bands.	XW			
										END OF TEST PIT AT 1.1m				
							1.5							
							2							
							2.5							
							3							
							3.5							

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ENVIRONMENTAL LOGS EXPLANATION NOTES

INTRODUCTION

These notes have been provided to amplify the environmental report in regard to classification methods, field procedures and certain matters relating to the logging of soil and rock. Not all notes are necessarily relevant to all reports.

Where geotechnical borehole logs are utilised for environmental purpose, reference should also be made to the explanatory notes included in the geotechnical report. Environmental logs are not suitable for geotechnical purposes.

The ground is a product of continuing natural and man-made processes and therefore exhibits a variety of characteristics and properties which vary from place to place and can change with time. Environmental studies include gathering and assimilating limited facts about these characteristics and properties in order to understand or predict the behaviour of the ground on a particular site under certain conditions. This report may contain such facts obtained by inspection, excavation, probing, sampling, testing or other means of investigation. If so, they are directly relevant only to the ground at the place where and time when the investigation was carried out.

DESCRIPTION AND CLASSIFICATION METHODS

The methods of description and classification of soils and rocks used in this report are based on Australian Standard 1726:2017 *'Geotechnical Site Investigations'*. In general, descriptions cover the following properties – soil or rock type, colour, structure, strength or density, and inclusions. Identification and classification of soil and rock involves judgement and the Company infers accuracy only to the extent that is common in current geoenvironmental practice.

Soil types are described according to the predominating particle size and behaviour as set out in the attached soil classification table qualified by the grading of other particles present (eg. sandy clay) as set out below:

Soil Classification	Particle Size
Clay	< 0.002mm
Silt	0.002 to 0.075mm
Sand	0.075 to 2.36mm
Gravel	2.36 to 63mm
Cobbles	63 to 200mm
Boulders	> 200mm

Non-cohesive soils are classified on the basis of relative density, generally from the results of Standard Penetration Test (SPT) as below:

Relative Density	SPT 'N' Value (blows/300mm)
Very loose (VL)	< 4
Loose (L)	4 to 10
Medium dense (MD)	10 to 30
Dense (D)	30 to 50
Very Dense (VD)	> 50

Cohesive soils are classified on the basis of strength (consistency) either by use of a hand penetrometer, vane shear, laboratory testing and/or tactile engineering examination. The strength terms are defined as follows.

Classification	Unconfined Compressive Strength (kPa)	Indicative Undrained Shear Strength (kPa)
Very Soft (VS)	≤ 25	≤ 12
Soft (S)	> 25 and ≤ 50	> 12 and ≤ 25
Firm (F)	> 50 and ≤ 100	> 25 and ≤ 50
Stiff (St)	> 100 and ≤ 200	> 50 and ≤ 100
Very Stiff (VSt)	> 200 and ≤ 400	> 100 and ≤ 200
Hard (Hd)	> 400	> 200
Friable (Fr)	Strength not attainable – soil crumbles	

Rock types are classified by their geological names, together with descriptive terms regarding weathering, strength, defects, etc. Where relevant, further information regarding rock classification is given in the text of the report. In the Sydney Basin, 'shale' is used to describe fissile mudstone, with a weakness parallel to bedding. Rocks with alternating inter-laminations of different grain size (eg. siltstone/claystone and siltstone/fine grained sandstone) are referred to as 'laminite'.

INVESTIGATION METHODS

The following is a brief summary of investigation methods currently adopted by the Company and some comments on their use and application. All methods except test pits, hand auger drilling and portable Dynamic Cone Penetrometers require the use of a mechanical rig which is commonly mounted on a truck chassis or track base.

Test Pits: These are normally excavated with a backhoe or a tracked excavator, allowing close examination of the insitu soils and 'weaker' bedrock if it is safe to descend into the pit. The depth of penetration is limited to about 3m for a backhoe and up to 6m for a large excavator. Limitations of test pits are the problems associated with disturbance and difficulty of reinstatement and the consequent effects on close-by structures. Care must be taken if construction is to be carried out near test pit locations to either properly recompact the backfill during construction or to design and construct the

structure so as not to be adversely affected by poorly compacted backfill at the test pit location.

Hand Auger Drilling: A borehole of 50mm to 100mm diameter is advanced by manually operated equipment. Refusal of the hand auger can occur on a variety of materials such as obstructions within any fill, tree roots, hard clay, gravel or ironstone, cobbles and boulders, and does not necessarily indicate rock level.

Continuous Spiral Flight Augers: The borehole is advanced using 75mm to 115mm diameter continuous spiral flight augers, which are withdrawn at intervals to allow sampling and insitu testing. This is a relatively economical means of drilling in clays and in sands above the water table. Samples are returned to the surface by the flights or may be collected after withdrawal of the auger flights, but they can be very disturbed and layers may become mixed. Information from the auger sampling (as distinct from specific sampling by SPTs or undisturbed samples) is of limited reliability due to mixing or softening of samples by groundwater, or uncertainties as to the original depth of the samples. Augering below the groundwater table is of even lesser reliability than augering above the water table.

Rock Augering: Use can be made of a Tungsten Carbide (TC) bit for auger drilling into rock to indicate rock quality and continuity by variation in drilling resistance and from examination of recovered rock cuttings. This method of investigation is quick and relatively inexpensive but provides only an indication of the likely rock strength and predicted values may be in error by a strength order. Where rock strengths may have a significant impact on construction feasibility or costs, then further investigation by means of cored boreholes may be warranted.

Wash Boring: The borehole is usually advanced by a rotary bit, with water being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be assessed from the cuttings, together with some information from "feel" and rate of penetration.

Mud Stabilised Drilling: Either Wash Boring or Continuous Core Drilling can use drilling mud as a circulating fluid to stabilise the borehole. The term 'mud' encompasses a range of products ranging from bentonite to polymers. The mud tends to mask the cuttings and reliable identification is only possible from intermittent intact sampling (eg. from SPT and U50 samples) or from rock coring, etc.

Continuous Core Drilling: A continuous core sample is obtained using a diamond tipped core barrel. Provided full core recovery is achieved (which is not always possible in very low strength rocks and granular soils), this technique provides a very reliable (but relatively expensive) method of investigation. In rocks, NMLC or HQ triple tube core barrels, which give a core of about 50mm and 61mm diameter, respectively, is usually used with water flush. The length of core recovered is compared to the length drilled and any length not recovered is shown as NO CORE. The location of NO CORE recovery is determined on site by the supervising engineer; where the location is uncertain, the loss is placed at the bottom of the drill run.

Standard Penetration Tests: Standard Penetration Tests (SPT) are used mainly in non-cohesive soils, but can also be used in cohesive soils, as a means of indicating density or strength and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289.6.3.1–2004 (R2016) *'Methods of Testing Soils for Engineering Purposes, Soil Strength and Consolidation Tests – Determination of the Penetration Resistance of a Soil – Standard Penetration Test (SPT)'*.

The test is carried out in a borehole by driving a 50mm diameter split sample tube with a tapered shoe, under the impact of a 63.5kg hammer with a free fall of 760mm. It is normal for the tube to be driven in three successive 150mm increments and the 'N' value is taken as the number of blows for the last 300mm. In dense sands, very hard clays or weak rock, the full 450mm 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 150mm of, say, 4, 6 and 7 blows, as

  N = 13
  4, 6, 7

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

  N > 30
  15, 30/40mm

The results of the test can be related empirically to the engineering properties of the soil.

A modification to the SPT is where the same driving system is used with a solid 60° tipped steel cone of the same diameter as the SPT hollow sampler. The solid cone can be continuously driven for some distance in soft clays or loose sands, or may be used where damage would otherwise occur to the SPT. The results of this Solid Cone Penetration Test (SCPT) are shown as 'N_c' on the borehole logs, together with the number of blows per 150mm penetration.

LOGS

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

The terms and symbols used in preparation of the logs are defined in the following pages.

Interpretation of the information shown on the logs, and its application to design and construction, should therefore take into account the spacing of boreholes or test pits, the method of drilling or excavation, the frequency of sampling and testing and the possibility of other than 'straight line' variations between the boreholes or test pits. Subsurface conditions between boreholes or test pits may vary significantly from conditions encountered at the borehole or test pit locations.

GROUNDWATER

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

- Although groundwater may be present, in low permeability soils it may enter the hole slowly or perhaps not at all during the time it 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 and may not be the same at the time of construction.
- 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 be washed out of the hole or 'reverted' chemically if reliable water observations are to be made.

More reliable measurements can be made by installing standpipes which are read after the groundwater level has stabilised at intervals ranging from several days to 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 perched water tables or surface water.

FILL

The presence of fill materials can often be determined only by the inclusion of foreign objects (eg. bricks, steel, etc) or by distinctly unusual colour, texture or fabric. Identification of the extent of fill materials will also depend on investigation methods and frequency. Where natural soils similar to those at the site are used for fill, it may be difficult with limited testing and sampling to reliably assess the extent of the fill.

The presence of fill materials is usually regarded with caution as the possible variation in density and material type is much greater than with natural soil deposits. Consequently, there is an increased risk of adverse environmental characteristics or behaviour. If the volume and nature of fill is of importance to a project, then frequent test pit excavations are preferable to boreholes.

LABORATORY TESTING

Laboratory testing has not been undertaken to confirm the soil classification and rock strengths indicated on the environmental logs unless noted in the report.

SYMBOL LEGENDS

SOIL


FILL


TOPSOIL


CLAY (CL, CI, CH)


SILT (ML, MH)


SAND (SP, SW)


GRAVEL (GP, GW)


SANDY CLAY (CL, CI, CH)


SILTY CLAY (CL, CI, CH)


CLAYEY SAND (SC)


SILTY SAND (SM)


GRAVELLY CLAY (CL, CI, CH)


CLAYEY GRAVEL (GC)


SANDY SILT (ML, MH)


PEAT AND HIGHLY ORGANIC SOILS (Pt)

ROCK


CONGLOMERATE


SANDSTONE


SHALE/MUDSTONE


SILTSTONE


CLAYSTONE


COAL


LAMINITE


LIMESTONE


PHYLLITE, SCHIST


TUFF


GRANITE, GABBRO


DOLERITE, DIORITE


BASALT, ANDESITE


QUARTZITE

OTHER MATERIALS


BRICKS OR PAVERS


CONCRETE


ASPHALTIC CONCRETE

CLASSIFICATION OF COARSE AND FINE GRAINED SOILS

Major Divisions		Group Symbol	Typical Names	Field Classification of Sand and Gravel	Laboratory Classification	
Coarse grained soil (more than 65% of soil excluding oversize fraction is greater than 0.075mm)	GRAVEL (more than half of coarse fraction is larger than 2.36mm	GW	Gravel and gravel-sand mixtures, little or no fines	Wide range in grain size and substantial amounts of all intermediate sizes, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	$C_u > 4$ $1 < C_c < 3$
		GP	Gravel and gravel-sand mixtures, little or no fines, uniform gravels	Predominantly one size or range of sizes with some intermediate sizes missing, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	Fails to comply with above
		GM	Gravel-silt mixtures and gravel-sand-silt mixtures	'Dirty' materials with excess of non-plastic fines, zero to medium dry strength	≥ 12% fines, fines are silty	Fines behave as silt
		GC	Gravel-clay mixtures and gravel-sand-clay mixtures	'Dirty' materials with excess of plastic fines, medium to high dry strength	≥ 12% fines, fines are clayey	Fines behave as clay
	SAND (more than half of coarse fraction is smaller than 2.36mm)	SW	Sand and gravel-sand mixtures, little or no fines	Wide range in grain size and substantial amounts of all intermediate sizes, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	$C_u > 6$ $1 < C_c < 3$
		SP	Sand and gravel-sand mixtures, little or no fines	Predominantly one size or range of sizes with some intermediate sizes missing, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	Fails to comply with above
		SM	Sand-silt mixtures	'Dirty' materials with excess of non-plastic fines, zero to medium dry strength	≥ 12% fines, fines are silty	N/A
		SC	Sand-clay mixtures	'Dirty' materials with excess of plastic fines, medium to high dry strength	≥ 12% fines, fines are clayey	

Major Divisions		Group Symbol	Typical Names	Field Classification of Silt and Clay			Laboratory Classification
				Dry Strength	Dilatancy	Toughness	% < 0.075mm
ine grained soils (more than 35% of soil excluding oversize fraction is less than 0.075mm)	SILT and CLAY (low to medium plasticity)	ML	Inorganic silt and very fine sand, rock flour, silty or clayey fine sand or silt with low plasticity	None to low	Slow to rapid	Low	Below A line
		CL, CI	Inorganic clay of low to medium plasticity, gravelly clay, sandy clay	Medium to high	None to slow	Medium	Above A line
		OL	Organic silt	Low to medium	Slow	Low	Below A line
	SILT and CLAY (high plasticity)	MH	Inorganic silt	Low to medium	None to slow	Low to medium	Below A line
		CH	Inorganic clay of high plasticity	High to very high	None	High	Above A line
		OH	Organic clay of medium to high plasticity, organic silt	Medium to high	None to very slow	Low to medium	Below A line
	Highly organic soil	Pt	Peat, highly organic soil	–	–	–	–

Laboratory Classification Criteria

A well graded coarse grained soil is one for which the coefficient of uniformity $Cu > 4$ and the coefficient of curvature $1 < C_c < 3$. Otherwise, the soil is poorly graded. These coefficients are given by:

$$C_U = \frac{D_{60}}{D_{10}} \qquad and \qquad C_C = \frac{(D_{30})^2}{D_{10}\, D_{60}}$$

Where D_{10}, D_{30} and D_{60} are those grain sizes for which 10%, 30% and 60% of the soil grains, respectively, are smaller.

NOTES:

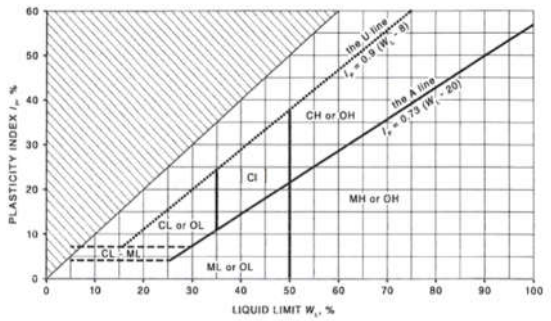
1 For a coarse grained soil with a fines content between 5% and 12%, the soil is given a dual classification comprising the two group symbols separated by a dash; for example, for a poorly graded gravel with between 5% and 12% silt fines, the classification is GP-GM.

2 Where the grading is determined from laboratory tests, it is defined by coefficients of curvature (C_c) and uniformity (C_u) derived from the particle size distribution curve.

3 Clay soils with liquid limits > 35% and ≤ 50% may be classified as being of medium plasticity.

4 The U line on the Modified Casagrande Chart is an approximate upper bound for most natural soils.

Modified Casagrande Chart for Classifying Silts and Clays according to their Behaviour



LOG SYMBOLS

Log Column	Symbol	Definition
Groundwater Record		Standing water level. Time delay following completion of drilling/excavation may be shown.
		Extent of borehole/test pit collapse shortly after drilling/excavation.
		Groundwater seepage into borehole or test pit noted during drilling or excavation.
Samples	ES	Sample taken over depth indicated, for environmental analysis.
	U50	Undisturbed 50mm diameter tube sample taken over depth indicated.
	DB	Bulk disturbed sample taken over depth indicated.
	DS	Small disturbed bag sample taken over depth indicated.
	ASB	Soil sample taken over depth indicated, for asbestos analysis.
	ASS	Soil sample taken over depth indicated, for acid sulfate soil analysis.
	SAL	Soil sample taken over depth indicated, for salinity analysis.
	PFAS	Soil sample taken over depth indicated, for analysis of Per- and Polyfluoroalkyl Substances.
Field Tests	N = 17 4, 7, 10	Standard Penetration Test (SPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration. 'Refusal' refers to apparent hammer refusal within the corresponding 150mm depth increment.
	N_c = 5 7 3R	Solid Cone Penetration Test (SCPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration for 60° solid cone driven by SPT hammer. 'R' refers to apparent hammer refusal within the corresponding 150mm depth increment.
	VNS = 25 PID = 100	Vane shear reading in kPa of undrained shear strength. Photoionisation detector reading in ppm (soil sample headspace test).
Moisture Condition (Fine Grained Soils)	w > PL $w \approx$ PL w < PL $w \approx$ LL w > LL	Moisture content estimated to be greater than plastic limit. Moisture content estimated to be approximately equal to plastic limit. Moisture content estimated to be less than plastic limit. Moisture content estimated to be near liquid limit. Moisture content estimated to be wet of liquid limit.
(Coarse Grained Soils)	D M W	DRY – runs freely through fingers. MOIST – does not run freely but no free water visible on soil surface. WET – free water visible on soil surface.
Strength (Consistency) Cohesive Soils	VS S F St VSt Hd Fr ( )	VERY SOFT – unconfined compressive strength ≤ 25kPa. SOFT – unconfined compressive strength > 25kPa and ≤ 50kPa. FIRM – unconfined compressive strength > 50kPa and ≤ 100kPa. STIFF – unconfined compressive strength > 100kPa and ≤ 200kPa. VERY STIFF – unconfined compressive strength > 200kPa and ≤ 400kPa. HARD – unconfined compressive strength > 400kPa. FRIABLE – strength not attainable, soil crumbles. Bracketed symbol indicates estimated consistency based on tactile examination or other assessment.
Density Index/ Relative Density (Cohesionless Soils)	VL L MD D VD ( )	**Density Index (I_D) Range (%)** / **SPT 'N' Value Range (Blows/300mm)** VERY LOOSE ≤ 15 / 0 – 4 LOOSE > 15 and ≤ 35 / 4 – 10 MEDIUM DENSE > 35 and ≤ 65 / 10 – 30 DENSE > 65 and ≤ 85 / 30 – 50 VERY DENSE > 85 / > 50 Bracketed symbol indicates estimated density based on ease of drilling or other assessment.

Log Column	Symbol	Definition
Hand Penetrometer Readings	300 250	Measures reading in kPa of unconfined compressive strength. Numbers indicate individual test results on representative undisturbed material unless noted otherwise.
Remarks	'V' bit	Hardened steel 'V' shaped bit.
	'TC' bit	Twin pronged tungsten carbide bit.
	T_{60}	Penetration of auger string in mm under static load of rig applied by drill head hydraulics without rotation of augers.
	Soil Origin	The geological origin of the soil can generally be described as: RESIDUAL – soil formed directly from insitu weathering of the underlying rock. No visible structure or fabric of the parent rock. EXTREMELY WEATHERED – soil formed directly from insitu weathering of the underlying rock. Material is of soil strength but retains the structure and/or fabric of the parent rock. ALLUVIAL – soil deposited by creeks and rivers. ESTUARINE – soil deposited in coastal estuaries, including sediments caused by inflowing creeks and rivers, and tidal currents. MARINE – soil deposited in a marine environment. AEOLIAN – soil carried and deposited by wind. COLLUVIAL – soil and rock debris transported downslope by gravity, with or without the assistance of flowing water. Colluvium is usually a thick deposit formed from a landslide. The description 'slopewash' is used for thinner surficial deposits. LITTORAL – beach deposited soil.

Classification of Material Weathering

Term		Abbreviation		Definition
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	Distinctly Weathered (Note 1)	HW	DW	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		Rock shows no sign of decomposition of individual minerals or colour changes.

NOTE 1: The term 'Distinctly Weathered' is used where it is not practicable to distinguish between 'Highly Weathered' and 'Moderately Weathered' rock. 'Distinctly Weathered' is defined as follows: *'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 weathering products in pores'*. There is some change in rock strength.

Rock Material Strength Classification

Term	Abbreviation	Uniaxial Compressive Strength (MPa)	Guide to Strength	
			Point Load Strength Index $Is_{(50)}$ (MPa)	Field Assessment
Very Low Strength	VL	0.6 to 2	0.03 to 0.1	Material crumbles under firm blows with sharp end of pick; can be peeled with knife; too hard to cut a triaxial sample by hand. Pieces up to 30mm thick can be broken by finger pressure.
Low Strength	L	2 to 6	0.1 to 0.3	Easily scored with a knife; indentations 1mm to 3mm show in the specimen with firm blows of the pick point; has dull sound under hammer. A piece of core 150mm long by 50mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
Medium Strength	M	6 to 20	0.3 to 1	Scored with a knife; a piece of core 150mm long by 50mm diameter can be broken by hand with difficulty.
High Strength	H	20 to 60	1 to 3	A piece of core 150mm long by 50mm diameter cannot be broken by hand but can be broken by a pick with a single firm blow; rock rings under hammer.
Very High Strength	VH	60 to 200	3 to 10	Hand specimen breaks with pick after more than one blow; rock rings under hammer.
Extremely High Strength	EH	> 200	> 10	Specimen requires many blows with geological pick to break through intact material; rock rings under hammer.

Appendix E: Laboratory Report(s) & COC Documents

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CERTIFICATE OF ANALYSIS 386894

Client Details

Client	JK Environments
Attention	Vittal Boggaram
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E37757B Rouse Hill Hospital**
Number of Samples	105 Soil, 2 Water
Date samples received	25/07/2025
Date completed instructions received	25/07/2025

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	01/08/2025
Date of Issue	01/08/2025

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Nyovan Moonean, Amanda Lee
Authorised by Asbestos Approved Signatory: Lucy Zhu

Authorised By
Nancy Zhang, Laboratory Manager

Results Approved By
Amanda Chui, LC/Air Toxics Supervisor
Dragana Tomas, Senior Chemist
Lucy Zhu, Asbestos Supervisor
Tabitha Roberts, Senior Chemist

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		386894-1	386894-5	386894-6	386894-10	386894-14
Your Reference	UNITS	TP501	TP502	TP502	TP503	TP504
Depth		0-0.1	0-0.1	0.2-0.3	0-0.1	0.2-0.1
Date Sampled		25/07/2025	22/07/2025	22/07/2025	25/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH 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	%	85	84	88	94	107

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		386894-16	386894-17	386894-20	386894-21	386894-25
Your Reference	UNITS	TP505	TP505	TP506	TP506	TP507
Depth		0-0.1	0.4-0.5	0-0.1	0.4-0.5	0-0.1
Date Sampled		23/07/2025	23/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH 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	104	106	109	103

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		386894-28	386894-30	386894-33	386894-34	386894-39
Your Reference	UNITS	TP508	TP509	TP510	TP510	TP511
Depth		0-0.1	0-0.1	0-0.1	0.6-0.7	0-0.1
Date Sampled		25/07/2025	22/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH 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	%	102	98	108	95	102

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		386894-41	386894-43	386894-46	386894-48	386894-50
Your Reference	UNITS	TP511	TP512	TP513	TP514	TP515
Depth		0.3-0.4	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH 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	%	112	102	106	109	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		386894-51	386894-53	386894-56	386894-58	386894-60
Your Reference	UNITS	TP515	TP516	TP517	TP518	TP519
Depth		0.2-0.3	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH 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	97	96	98	102

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		386894-62	386894-64	386894-66	386894-67	386894-69
Your Reference	UNITS	TP520	TP521	TP522	TP522	TP523
Depth		0-0.1	0-0.1	0-0.1	0.3-0.4	0-0.1
Date Sampled		24/07/2025	23/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH 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	%	98	90	95	101	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		386894-71	386894-73	386894-75	386894-78	386894-81
Your Reference	UNITS	TP524	TP525	TP526	TP527	TP528
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH 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	96	101	103	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		386894-83	386894-85	386894-86	386894-89	386894-90
Your Reference	UNITS	TP529	TP530	TP530	TP531	TP531
Depth		0-0.1	0-0.1	0.3-0.4	0-0.1	0.2-0.3
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	30/07/2025	30/07/2025	30/07/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH 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	%	106	95	110	108	106

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		386894-93	386894-94	386894-97	386894-98	386894-101
Your Reference	UNITS	TP532	TP532	SDUP501	SDUP503	SDUP507
Depth		0-0.1	0.2-0.3	-	-	-
Date Sampled		24/07/2025	24/07/2025	22/07/2025	23/07/2025	25/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025	30/07/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH 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	%	106	104	108	106	103

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		386894-102	386894-103	386894-105	386894-106
Your Reference	UNITS	TB-501	TS-501	TB-502	TS-502
Depth		-	-	-	-
Date Sampled		22/07/2025	22/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025
TRH C_6 - C_9	mg/kg	<25	[NA]	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	[NA]	<25	[NA]
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	[NA]	<25	[NA]
Benzene	mg/kg	<0.2	108%	<0.2	106%
Toluene	mg/kg	<0.5	106%	<0.5	103%
Ethylbenzene	mg/kg	<1	107%	<1	102%
m+p-xylene	mg/kg	<2	106%	<2	102%
o-Xylene	mg/kg	<1	106%	<1	102%
Naphthalene	mg/kg	<1	[NA]	<1	[NA]
Total +ve Xylenes	mg/kg	<1	[NA]	<1	[NA]
Surrogate aaa-Trifluorotoluene	%	109	113	106	104

svTRH (C10-C40) in Soil						
Our Reference		386894-1	386894-5	386894-6	386894-10	386894-14
Your Reference	UNITS	TP501	TP502	TP502	TP503	TP504
Depth		0-0.1	0-0.1	0.2-0.3	0-0.1	0.2-0.1
Date Sampled		25/07/2025	22/07/2025	22/07/2025	25/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	29/07/2025	28/07/2025	28/07/2025	28/07/2025
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	100	<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	140	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	140	<50	<50	<50
Surrogate o-Terphenyl	%	87	82	87	88	86

svTRH (C10-C40) in Soil						
Our Reference		386894-16	386894-17	386894-20	386894-21	386894-25
Your Reference	UNITS	TP505	TP505	TP506	TP506	TP507
Depth		0-0.1	0.4-0.5	0-0.1	0.4-0.5	0-0.1
Date Sampled		23/07/2025	23/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	29/07/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	190	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	110	<100	<100	<100	240
Total +ve TRH (C10-C36)	mg/kg	300	<50	<50	<50	240
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	230	<100	<100	<100	200
TRH >C_{34} -C_{40}	mg/kg	110	<100	<100	<100	320
Total +ve TRH (>C10-C40)	mg/kg	330	<50	<50	<50	520
Surrogate o-Terphenyl	%	90	86	86	84	81

svTRH (C10-C40) in Soil						
Our Reference		386894-28	386894-30	386894-33	386894-34	386894-39
Your Reference	UNITS	TP508	TP509	TP510	TP510	TP511
Depth		0-0.1	0-0.1	0-0.1	0.6-0.7	0-0.1
Date Sampled		25/07/2025	22/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
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	%	85	87	86	86	85

svTRH (C10-C40) in Soil						
Our Reference		386894-41	386894-43	386894-46	386894-48	386894-50
Your Reference	UNITS	TP511	TP512	TP513	TP514	TP515
Depth		0.3-0.4	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	28/07/2025	29/07/2025	29/07/2025	29/07/2025
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	140	110
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	140	110
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	120	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	200	170
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	320	170
Surrogate o-Terphenyl	%	85	87	89	82	79

svTRH (C10-C40) in Soil						
Our Reference		386894-51	386894-53	386894-56	386894-58	386894-60
Your Reference	UNITS	TP515	TP516	TP517	TP518	TP519
Depth		0.2-0.3	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	%	85	87	85	83	82

svTRH (C10-C40) in Soil						
Our Reference		386894-62	386894-64	386894-66	386894-67	386894-69
Your Reference	UNITS	TP520	TP521	TP522	TP522	TP523
Depth		0-0.1	0-0.1	0-0.1	0.3-0.4	0-0.1
Date Sampled		24/07/2025	23/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	330
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	330
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	310
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	420
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	730
Surrogate o-Terphenyl	%	86	82	83	82	80

svTRH (C10-C40) in Soil						
Our Reference		386894-71	386894-73	386894-75	386894-78	386894-81
Your Reference	UNITS	TP524	TP525	TP526	TP527	TP528
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
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	%	87	93	83	81	85

svTRH (C10-C40) in Soil						
Our Reference		386894-83	386894-85	386894-86	386894-89	386894-90
Your Reference	UNITS	TP529	TP530	TP530	TP531	TP531
Depth		0-0.1	0-0.1	0.3-0.4	0-0.1	0.2-0.3
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
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	%	86	85	82	82	98

svTRH (C10-C40) in Soil						
Our Reference		386894-93	386894-94	386894-97	386894-98	386894-101
Your Reference	UNITS	TP532	TP532	SDUP501	SDUP503	SDUP507
Depth		0-0.1	0.2-0.3	-	-	-
Date Sampled		24/07/2025	24/07/2025	22/07/2025	23/07/2025	25/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
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	260	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	260	<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	210	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	330	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	540	<50	<50	<50	<50
Surrogate o-Terphenyl	%	76	91	83	80	81

svTRH (C10-C40) in Soil			
Our Reference		386894-102	386894-105
Your Reference	UNITS	TB-501	TB-502
Depth		-	-
Date Sampled		22/07/2025	24/07/2025
Type of sample		Soil	Soil
Date extracted	-	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	92	80

PAHs in Soil						
Our Reference		386894-1	386894-5	386894-6	386894-10	386894-14
Your Reference	UNITS	TP501	TP502	TP502	TP503	TP504
Depth		0-0.1	0-0.1	0.2-0.3	0-0.1	0.2-0.1
Date Sampled		25/07/2025	22/07/2025	22/07/2025	25/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	0.2	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.2	<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	0.1	<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	0.2	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	0.98	<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	101	105	100	96

PAHs in Soil						
Our Reference		386894-16	386894-17	386894-20	386894-21	386894-25
Your Reference	UNITS	TP505	TP505	TP506	TP506	TP507
Depth		0-0.1	0.4-0.5	0-0.1	0.4-0.5	0-0.1
Date Sampled		23/07/2025	23/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	0.2	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.6	<0.1	<0.1	<0.1	0.1
Pyrene	mg/kg	0.5	<0.1	<0.1	<0.1	0.1
Benzo(a)anthracene	mg/kg	0.3	<0.1	<0.1	<0.1	0.1
Chrysene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.5	<0.2	<0.2	<0.2	0.2
Benzo(a)pyrene	mg/kg	0.3	<0.05	0.05	<0.05	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	<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	0.3	<0.1	<0.1	<0.1	0.4
Total +ve PAH's	mg/kg	3.3	<0.05	0.05	<0.05	1.2
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	%	101	104	97	93	97

PAHs in Soil						
Our Reference		386894-28	386894-30	386894-33	386894-34	386894-39
Your Reference	UNITS	TP508	TP509	TP510	TP510	TP511
Depth		0-0.1	0-0.1	0-0.1	0.6-0.7	0-0.1
Date Sampled		25/07/2025	22/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	%	106	104	102	117	96

PAHs in Soil						
Our Reference		386894-41	386894-43	386894-46	386894-48	386894-50
Your Reference	UNITS	TP511	TP512	TP513	TP514	TP515
Depth		0.3-0.4	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	0.4	0.2
Pyrene	mg/kg	<0.1	<0.1	<0.1	0.4	0.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.3	0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.6	0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.4	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.3	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	0.5	0.2
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	3.2	1.0
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	0.6	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Surrogate p-Terphenyl-d14	%	93	107	103	97	104

PAHs in Soil						
Our Reference		386894-51	386894-53	386894-56	386894-58	386894-60
Your Reference	UNITS	TP515	TP516	TP517	TP518	TP519
Depth		0.2-0.3	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	%	98	102	97	96	98

PAHs in Soil						
Our Reference		386894-62	386894-64	386894-66	386894-67	386894-69
Your Reference	UNITS	TP520	TP521	TP522	TP522	TP523
Depth		0-0.1	0-0.1	0-0.1	0.3-0.4	0-0.1
Date Sampled		24/07/2025	23/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	0.2
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	0.1	<0.1	0.5
Pyrene	mg/kg	<0.1	0.2	0.1	<0.1	0.5
Benzo(a)anthracene	mg/kg	<0.1	0.1	<0.1	<0.1	0.3
Chrysene	mg/kg	<0.1	0.1	<0.1	<0.1	0.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.2	<0.2	<0.2	0.5
Benzo(a)pyrene	mg/kg	<0.05	0.2	0.1	<0.05	0.4
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
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	0.4
Total +ve PAH's	mg/kg	<0.05	1.3	0.4	<0.05	3.1
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	0.6
Surrogate p-Terphenyl-d14	%	102	96	101	115	95

PAHs in Soil						
Our Reference		386894-71	386894-73	386894-75	386894-78	386894-81
Your Reference	UNITS	TP524	TP525	TP526	TP527	TP528
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	0.2	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.3	<0.1	0.1	<0.1
Pyrene	mg/kg	<0.1	0.2	<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	0.1	<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	1.1	<0.05	0.2	<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	%	103	102	93	96	99

PAHs in Soil						
Our Reference		386894-83	386894-85	386894-86	386894-89	386894-90
Your Reference	UNITS	TP529	TP530	TP530	TP531	TP531
Depth		0-0.1	0-0.1	0.3-0.4	0-0.1	0.2-0.3
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	0.3	0.2	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.2	0.2	<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	0.1	0.1	<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	1.2	0.67	<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	%	102	97	117	99	91

PAHs in Soil						
Our Reference		386894-93	386894-94	386894-97	386894-98	386894-101
Your Reference	UNITS	TP532	TP532	SDUP501	SDUP503	SDUP507
Depth		0-0.1	0.2-0.3	-	-	-
Date Sampled		24/07/2025	24/07/2025	22/07/2025	23/07/2025	25/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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	0.2	0.1	<0.1	0.2	<0.1
Pyrene	mg/kg	0.2	<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	0.3	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.2	0.06	<0.05	0.1	<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	0.3	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	1.6	0.2	<0.05	0.51	<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	%	98	112	89	94	92

PAHs in Soil			
Our Reference		386894-102	386894-105
Your Reference	UNITS	TB-501	TB-502
Depth		-	-
Date Sampled		22/07/2025	24/07/2025
Type of sample		Soil	Soil
Date extracted	-	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	97	99

Organochlorine Pesticides in soil						
Our Reference		386894-1	386894-5	386894-10	386894-14	386894-16
Your Reference	UNITS	TP501	TP502	TP503	TP504	TP505
Depth		0-0.1	0-0.1	0-0.1	0.2-0.1	0-0.1
Date Sampled		25/07/2025	22/07/2025	25/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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
Mirex	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
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	96	100	101	99	99

Organochlorine Pesticides in soil						
Our Reference		386894-20	386894-25	386894-28	386894-30	386894-33
Your Reference	UNITS	TP506	TP507	TP508	TP509	TP510
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	23/07/2025	25/07/2025	22/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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
Mirex	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
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	102	101	108	107	106

Organochlorine Pesticides in soil						
Our Reference		386894-39	386894-43	386894-46	386894-48	386894-50
Your Reference	UNITS	TP511	TP512	TP513	TP514	TP515
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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
Mirex	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
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	100	110	108	101	106

Organochlorine Pesticides in soil						
Our Reference		386894-53	386894-56	386894-58	386894-60	386894-62
Your Reference	UNITS	TP516	TP517	TP518	TP519	TP520
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		25/07/2025	23/07/2025	23/07/2025	23/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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
Mirex	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
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	105	101	100	102	104

Organochlorine Pesticides in soil						
Our Reference		386894-64	386894-66	386894-69	386894-71	386894-73
Your Reference	UNITS	TP521	TP522	TP523	TP524	TP525
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	23/07/2025	23/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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
Mirex	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
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	97	101	97	109	104

Organochlorine Pesticides in soil						
Our Reference		386894-75	386894-78	386894-81	386894-83	386894-85
Your Reference	UNITS	TP526	TP527	TP528	TP529	TP530
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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
Mirex	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
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	99	99	105	105	102

Organochlorine Pesticides in soil						
Our Reference		386894-89	386894-93	386894-97	386894-98	386894-102
Your Reference	UNITS	TP531	TP532	SDUP501	SDUP503	TB-501
Depth		0-0.1	0-0.1	-	-	-
Date Sampled		24/07/2025	24/07/2025	22/07/2025	23/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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
Mirex	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
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	103	99	96	96	102

Organochlorine Pesticides in soil		
Our Reference		386894-105
Your Reference	UNITS	TB-502
Depth		-
Date Sampled		24/07/2025
Type of sample		Soil
Date extracted	-	28/07/2025
Date analysed	-	29/07/2025
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Mirex	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	103

Organophosphorus Pesticides in Soil						
Our Reference		386894-1	386894-5	386894-10	386894-14	386894-16
Your Reference	UNITS	TP501	TP502	TP503	TP504	TP505
Depth		0-0.1	0-0.1	0-0.1	0.2-0.1	0-0.1
Date Sampled		25/07/2025	22/07/2025	25/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	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
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-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
Fenthion	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
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	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
Phosalone	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
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	96	100	101	99	99

Organophosphorus Pesticides in Soil						
Our Reference		386894-20	386894-25	386894-28	386894-30	386894-33
Your Reference	UNITS	TP506	TP507	TP508	TP509	TP510
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	23/07/2025	25/07/2025	22/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	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
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-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
Fenthion	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
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	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
Phosalone	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
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	102	101	108	107	106

Organophosphorus Pesticides in Soil						
Our Reference		386894-39	386894-43	386894-46	386894-48	386894-50
Your Reference	UNITS	TP511	TP512	TP513	TP514	TP515
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	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
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-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
Fenthion	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
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	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
Phosalone	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
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	100	110	108	101	106

Organophosphorus Pesticides in Soil						
Our Reference		386894-53	386894-56	386894-58	386894-60	386894-62
Your Reference	UNITS	TP516	TP517	TP518	TP519	TP520
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		25/07/2025	23/07/2025	23/07/2025	23/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	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
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-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
Fenthion	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
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	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
Phosalone	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
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	105	101	100	102	104

Organophosphorus Pesticides in Soil						
Our Reference		386894-64	386894-66	386894-69	386894-71	386894-73
Your Reference	UNITS	TP521	TP522	TP523	TP524	TP525
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	23/07/2025	23/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	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
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-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
Fenthion	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
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	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
Phosalone	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
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	97	101	97	109	104

Organophosphorus Pesticides in Soil						
Our Reference		386894-75	386894-78	386894-81	386894-83	386894-85
Your Reference	UNITS	TP526	TP527	TP528	TP529	TP530
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	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
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-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
Fenthion	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
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	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
Phosalone	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
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	99	99	105	105	102

Organophosphorus Pesticides in Soil						
Our Reference		386894-89	386894-93	386894-97	386894-98	386894-102
Your Reference	UNITS	TP531	TP532	SDUP501	SDUP503	TB-501
Depth		0-0.1	0-0.1	-	-	-
Date Sampled		24/07/2025	24/07/2025	22/07/2025	23/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	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
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-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
Fenthion	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
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	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
Phosalone	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
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	103	99	96	96	102

Organophosphorus Pesticides in Soil		
Our Reference		386894-105
Your Reference	UNITS	TB-502
Depth		-
Date Sampled		24/07/2025
Type of sample		Soil
Date extracted	-	28/07/2025
Date analysed	-	29/07/2025
Dichlorvos	mg/kg	<0.1
Mevinphos	mg/kg	<0.1
Phorate	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Disulfoton	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Parathion-Methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenthion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Methidathion	mg/kg	<0.1
Fenamiphos	mg/kg	<0.1
Ethion	mg/kg	<0.1
Phosalone	mg/kg	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1
Coumaphos	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	103

PCBs in Soil						
Our Reference		386894-1	386894-5	386894-10	386894-14	386894-16
Your Reference	UNITS	TP501	TP502	TP503	TP504	TP505
Depth		0-0.1	0-0.1	0-0.1	0.2-0.1	0-0.1
Date Sampled		25/07/2025	22/07/2025	25/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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 2-Fluorobiphenyl	%	94	97	97	96	97

PCBs in Soil						
Our Reference		386894-20	386894-25	386894-28	386894-30	386894-33
Your Reference	UNITS	TP506	TP507	TP508	TP509	TP510
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	23/07/2025	25/07/2025	22/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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 2-Fluorobiphenyl	%	97	97	103	101	100

PCBs in Soil						
Our Reference		386894-39	386894-43	386894-46	386894-48	386894-50
Your Reference	UNITS	TP511	TP512	TP513	TP514	TP515
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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 2-Fluorobiphenyl	%	96	103	102	96	101

PCBs in Soil						
Our Reference		386894-53	386894-56	386894-58	386894-60	386894-62
Your Reference	UNITS	TP516	TP517	TP518	TP519	TP520
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		25/07/2025	23/07/2025	23/07/2025	23/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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 2-Fluorobiphenyl	%	101	96	96	97	100

PCBs in Soil						
Our Reference		386894-64	386894-66	386894-69	386894-71	386894-73
Your Reference	UNITS	TP521	TP522	TP523	TP524	TP525
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	23/07/2025	23/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Aroclor 1016	mg/kg	[NT]	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	[NT]	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	[NT]	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	[NT]	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	[NT]	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	[NT]	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	[NT]	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	1.2	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	93	97	93	103	99

PCBs in Soil						
Our Reference		386894-75	386894-78	386894-81	386894-83	386894-85
Your Reference	UNITS	TP526	TP527	TP528	TP529	TP530
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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 2-Fluorobiphenyl	%	94	96	99	101	96

PCBs in Soil						
Our Reference		386894-89	386894-93	386894-97	386894-98	386894-102
Your Reference	UNITS	TP531	TP532	SDUP501	SDUP503	TB-501
Depth		0-0.1	0-0.1	-	-	-
Date Sampled		24/07/2025	24/07/2025	22/07/2025	23/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
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 2-Fluorobiphenyl	%	92	96	92	92	92

PCBs in Soil		
Our Reference		386894-105
Your Reference	UNITS	TB-502
Depth		-
Date Sampled		24/07/2025
Type of sample		Soil
Date extracted	-	28/07/2025
Date analysed	-	29/07/2025
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-Fluorobiphenyl	%	99

Acid Extractable metals in soil						
Our Reference		386894-1	386894-5	386894-6	386894-10	386894-14
Your Reference	UNITS	TP501	TP502	TP502	TP503	TP504
Depth		0-0.1	0-0.1	0.2-0.3	0-0.1	0.2-0.1
Date Sampled		25/07/2025	22/07/2025	22/07/2025	25/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025	30/07/2025
Arsenic	mg/kg	10	5	7	9	12
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	14	11	14	13
Copper	mg/kg	12	25	22	22	22
Lead	mg/kg	24	24	23	22	27
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	14	8	5	20
Zinc	mg/kg	16	46	36	32	69

Acid Extractable metals in soil						
Our Reference		386894-16	386894-17	386894-20	386894-21	386894-25
Your Reference	UNITS	TP505	TP505	TP506	TP506	TP507
Depth		0-0.1	0.4-0.5	0-0.1	0.4-0.5	0-0.1
Date Sampled		23/07/2025	23/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025	30/07/2025
Arsenic	mg/kg	7	7	6	6	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	15	12	17	14
Copper	mg/kg	22	8	14	11	38
Lead	mg/kg	31	19	18	16	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	5	5	7	14
Zinc	mg/kg	35	17	30	20	39

Acid Extractable metals in soil						
Our Reference		386894-28	386894-30	386894-33	386894-34	386894-39
Your Reference	UNITS	TP508	TP509	TP510	TP510	TP511
Depth		0-0.1	0-0.1	0-0.1	0.6-0.7	0-0.1
Date Sampled		25/07/2025	22/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025	30/07/2025
Arsenic	mg/kg	8	13	8	30	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	14	11	9	17
Copper	mg/kg	12	28	17	28	18
Lead	mg/kg	23	24	22	25	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	18	9	33	7
Zinc	mg/kg	21	62	37	110	27

Acid Extractable metals in soil						
Our Reference		386894-41	386894-43	386894-46	386894-48	386894-50
Your Reference	UNITS	TP511	TP512	TP513	TP514	TP515
Depth		0.3-0.4	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025	30/07/2025
Arsenic	mg/kg	6	12	13	5	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	14	17	14	17
Copper	mg/kg	12	11	15	21	34
Lead	mg/kg	19	26	25	22	22
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	4	5	9	22
Zinc	mg/kg	18	19	27	36	35

Acid Extractable metals in soil						
Our Reference		386894-51	386894-53	386894-56	386894-58	386894-60
Your Reference	UNITS	TP515	TP516	TP517	TP518	TP519
Depth		0.2-0.3	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025	30/07/2025
Arsenic	mg/kg	6	9	13	8	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	13	18	19	20
Copper	mg/kg	11	16	12	14	21
Lead	mg/kg	18	21	22	24	25
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	6	8	5	7
Zinc	mg/kg	12	38	23	20	34

Acid Extractable metals in soil						
Our Reference		386894-62	386894-64	386894-66	386894-67	386894-69
Your Reference	UNITS	TP520	TP521	TP522	TP522	TP523
Depth		0-0.1	0-0.1	0-0.1	0.3-0.4	0-0.1
Date Sampled		24/07/2025	23/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025	30/07/2025
Arsenic	mg/kg	10	4	4	10	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	15	12	20	16
Copper	mg/kg	14	44	19	11	23
Lead	mg/kg	25	46	27	24	25
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	25	6	5	14
Zinc	mg/kg	37	61	34	16	42

Acid Extractable metals in soil						
Our Reference		386894-71	386894-73	386894-75	386894-78	386894-81
Your Reference	UNITS	TP524	TP525	TP526	TP527	TP528
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025	30/07/2025
Arsenic	mg/kg	8	8	7	11	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	21	16	20	19	18
Copper	mg/kg	17	13	15	16	15
Lead	mg/kg	26	27	26	26	28
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	7	7	9	10
Zinc	mg/kg	31	26	26	31	38

Acid Extractable metals in soil						
Our Reference		386894-83	386894-85	386894-86	386894-89	386894-90
Your Reference	UNITS	TP529	TP530	TP530	TP531	TP531
Depth		0-0.1	0-0.1	0.3-0.4	0-0.1	0.2-0.3
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025	30/07/2025
Arsenic	mg/kg	7	9	9	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	27	34	4	5
Copper	mg/kg	15	22	13	4	4
Lead	mg/kg	28	24	22	5	7
Mercury	mg/kg	<0.1	<0.1	<0.1	0.5	0.2
Nickel	mg/kg	8	19	11	3	3
Zinc	mg/kg	27	37	17	26	15

Acid Extractable metals in soil						
Our Reference		386894-93	386894-94	386894-97	386894-98	386894-101
Your Reference	UNITS	TP532	TP532	SDUP501	SDUP503	SDUP507
Depth		0-0.1	0.2-0.3	-	-	-
Date Sampled		24/07/2025	24/07/2025	22/07/2025	23/07/2025	25/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025	30/07/2025
Arsenic	mg/kg	<4	4	12	6	11
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	11	15	14	17
Copper	mg/kg	29	17	26	41	12
Lead	mg/kg	22	19	25	45	24
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	14	22	16	4
Zinc	mg/kg	39	42	87	54	16

Acid Extractable metals in soil					
Our Reference		386894-102	386894-105	386894-108	386894-109
Your Reference	UNITS	TB-501	TB-502	TP531 - [TRIPLICATE]	TP532 - [TRIPLICATE]
Depth		-	-	0.2-0.3	0-0.1
Date Sampled		22/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	30/07/2025	30/07/2025	30/07/2025	30/07/2025
Arsenic	mg/kg	<4	<4	7	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	3	3	6	13
Copper	mg/kg	<1	<1	3	19
Lead	mg/kg	4	4	7	22
Mercury	mg/kg	<0.1	<0.1	0.2	<0.1
Nickel	mg/kg	<1	<1	2	9
Zinc	mg/kg	3	3	13	33

Moisture						
Our Reference		386894-1	386894-5	386894-6	386894-10	386894-14
Your Reference	UNITS	TP501	TP502	TP502	TP503	TP504
Depth		0-0.1	0-0.1	0.2-0.3	0-0.1	0.2-0.1
Date Sampled		25/07/2025	22/07/2025	22/07/2025	25/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Moisture	%	18	8.7	16	16	14

Moisture						
Our Reference		386894-16	386894-17	386894-20	386894-21	386894-25
Your Reference	UNITS	TP505	TP505	TP506	TP506	TP507
Depth		0-0.1	0.4-0.5	0-0.1	0.4-0.5	0-0.1
Date Sampled		23/07/2025	23/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Moisture	%	15	14	12	15	13

Moisture						
Our Reference		386894-28	386894-30	386894-33	386894-34	386894-39
Your Reference	UNITS	TP508	TP509	TP510	TP510	TP511
Depth		0-0.1	0-0.1	0-0.1	0.6-0.7	0-0.1
Date Sampled		25/07/2025	22/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Moisture	%	17	12	14	13	13

Moisture						
Our Reference		386894-41	386894-43	386894-46	386894-48	386894-50
Your Reference	UNITS	TP511	TP512	TP513	TP514	TP515
Depth		0.3-0.4	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Moisture	%	14	21	19	11	13

Moisture						
Our Reference		386894-51	386894-53	386894-56	386894-58	386894-60
Your Reference	UNITS	TP515	TP516	TP517	TP518	TP519
Depth		0.2-0.3	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Moisture	%	16	26	15	19	22

Moisture						
Our Reference		386894-62	386894-64	386894-66	386894-67	386894-69
Your Reference	UNITS	TP520	TP521	TP522	TP522	TP523
Depth		0-0.1	0-0.1	0-0.1	0.3-0.4	0-0.1
Date Sampled		24/07/2025	23/07/2025	23/07/2025	23/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Moisture	%	24	14	22	20	17

Moisture						
Our Reference		386894-71	386894-73	386894-75	386894-78	386894-81
Your Reference	UNITS	TP524	TP525	TP526	TP527	TP528
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Moisture	%	22	21	22	21	22

Moisture						
Our Reference		386894-83	386894-85	386894-86	386894-89	386894-90
Your Reference	UNITS	TP529	TP530	TP530	TP531	TP531
Depth		0-0.1	0-0.1	0.3-0.4	0-0.1	0.2-0.3
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Moisture	%	23	24	12	11	12

Moisture						
Our Reference		386894-93	386894-94	386894-97	386894-98	386894-101
Your Reference	UNITS	TP532	TP532	SDUP501	SDUP503	SDUP507
Depth		0-0.1	0.2-0.3	-	-	-
Date Sampled		24/07/2025	24/07/2025	22/07/2025	23/07/2025	25/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Moisture	%	8.7	13	17	16	16

Moisture			
Our Reference		386894-102	386894-105
Your Reference	UNITS	TB-501	TB-502
Depth		-	-
Date Sampled		22/07/2025	24/07/2025
Type of sample		Soil	Soil
Date prepared	-	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025
Moisture	%	0.1	0.4

Asbestos ID - soils NEPM - ASB-001						
Our Reference		386894-1	386894-5	386894-10	386894-14	386894-16
Your Reference	UNITS	TP501	TP502	TP503	TP504	TP505
Depth		0-0.1	0-0.1	0-0.1	0.2-0.1	0-0.1
Date Sampled		25/07/2025	22/07/2025	25/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	01/08/2025	01/08/2025	01/08/2025	01/08/2025	01/08/2025
Sample mass tested	g	677.2	902.5	585.85	631.56	792.26
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 (AS4964) >0.1g/kg	-	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
Total Asbestos[#1]	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM - ASB-001						
Our Reference		386894-20	386894-25	386894-28	386894-30	386894-33
Your Reference	UNITS	TP506	TP507	TP508	TP509	TP510
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	23/07/2025	25/07/2025	22/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	01/08/2025	01/08/2025	01/08/2025	01/08/2025	01/08/2025
Sample mass tested	g	746.13	876.56	713.64	787.57	708.3
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 (AS4964) >0.1g/kg	-	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
Total Asbestos[#1]	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM - ASB-001						
Our Reference		386894-39	386894-43	386894-46	386894-48	386894-50
Your Reference	UNITS	TP511	TP512	TP513	TP514	TP515
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	25/07/2025	22/07/2025	22/07/2025	23/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	01/08/2025	01/08/2025	01/08/2025	01/08/2025	01/08/2025
Sample mass tested	g	705.89	667.47	630.62	929.41	725.72
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 (AS4964) >0.1g/kg	-	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
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM - ASB-001						
Our Reference		386894-53	386894-56	386894-58	386894-60	386894-62
Your Reference	UNITS	TP516	TP517	TP518	TP519	TP520
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		25/07/2025	23/07/2025	23/07/2025	23/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	01/08/2025	01/08/2025	01/08/2025	01/08/2025	01/08/2025
Sample mass tested	g	639.62	654.49	652.79	762.7	622.12
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 (AS4964) >0.1g/kg	-	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
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM - ASB-001						
Our Reference		386894-64	386894-66	386894-69	386894-71	386894-73
Your Reference	UNITS	TP521	TP522	TP523	TP524	TP525
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		23/07/2025	23/07/2025	23/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	01/08/2025	01/08/2025	01/08/2025	01/08/2025	01/08/2025
Sample mass tested	g	787.32	525.91	887.91	527.89	688.01
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 (AS4964) >0.1g/kg	-	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
Total Asbestos[#1]	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM - ASB-001						
Our Reference		386894-75	386894-78	386894-81	386894-83	386894-85
Your Reference	UNITS	TP526	TP527	TP528	TP529	TP530
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	01/08/2025	01/08/2025	01/08/2025	01/08/2025	01/08/2025
Sample mass tested	g	588.75	513.34	622.96	581.32	593.87
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 (AS4964) >0.1g/kg	-	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
Total Asbestos[#1]	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM - ASB-001			
Our Reference		386894-89	386894-93
Your Reference	UNITS	TP531	TP532
Depth		0-0.1	0-0.1
Date Sampled		24/07/2025	24/07/2025
Type of sample		Soil	Soil
Date analysed	-	01/08/2025	01/08/2025
Sample mass tested	g	763.64	878.03
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	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
Total Asbestos#1	g/kg	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–
FA and AF Estimation*	g	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001
Asbestos comments	-	Nil	Nil

PFAS in Soils Extended						
Our Reference		386894-5	386894-14	386894-16	386894-20	386894-30
Your Reference	UNITS	TP502	TP504	TP505	TP506	TP509
Depth		0-0.1	0.2-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		22/07/2025	22/07/2025	23/07/2025	23/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.4	0.1	0.9	0.2	0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	0.2
Perfluorohexanoic acid	µg/kg	<0.1	0.2	<0.1	<0.1	0.3
Perfluoroheptanoic acid	µg/kg	<0.1	0.3	<0.1	<0.1	0.4
Perfluorooctanoic acid PFOA	µg/kg	0.2	0.7	0.3	<0.1	1.1
Perfluorononanoic acid	µg/kg	<0.1	0.2	<0.1	<0.1	0.4
Perfluorodecanoic acid	µg/kg	<0.5	2	<0.5	<0.5	3
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	1	<0.5	<0.5	2
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5	<5	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5	<5	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	98	96	98	99	102
Surrogate $^{13}C_2$ *PFOA*	%	98	100	100	101	101
Extracted ISTD $^{13}C_3$ *PFBS*	%	105	105	112	107	114
Extracted ISTD $^{18}O_2$ *PFHxS*	%	102	104	102	100	105
Extracted ISTD $^{13}C_4$ *PFOS*	%	108	107	104	107	104

PFAS in Soils Extended						
Our Reference		386894-5	386894-14	386894-16	386894-20	386894-30
Your Reference	UNITS	TP502	TP504	TP505	TP506	TP509
Depth		0-0.1	0.2-0.1	0-0.1	0-0.1	0-0.1
Date Sampled		22/07/2025	22/07/2025	23/07/2025	23/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	105	104	104	105	105
Extracted ISTD $^{13}C_3$ *PFPeA*	%	107	104	104	103	107
Extracted ISTD $^{13}C_2$ *PFHxA*	%	103	100	102	102	105
Extracted ISTD $^{13}C_4$ *PFHpA*	%	104	98	105	104	104
Extracted ISTD $^{13}C_4$ *PFOA*	%	106	104	103	102	104
Extracted ISTD $^{13}C_5$ *PFNA*	%	110	108	106	110	110
Extracted ISTD $^{13}C_2$ *PFDA*	%	113	109	115	110	108
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	112	106	103	106	109
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	115	113	110	109	110
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	122	117	120	122	123
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	111	105	111	112	110
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	125	114	122	114	110
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	141	122	155	116	121
Extracted ISTD $^{13}C_8$ *FOSA*	%	115	113	113	111	116
Extracted ISTD d_3 *N MeFOSA*	%	103	106	103	104	105
Extracted ISTD d_5 *N EtFOSA*	%	108	110	105	105	109
Extracted ISTD d_7 *N MeFOSE*	%	107	107	108	107	107
Extracted ISTD d_9 *N EtFOSE*	%	103	103	101	104	105
Extracted ISTD d_3 *N MeFOSAA*	%	119	108	115	105	110
Extracted ISTD d_5 *N EtFOSAA*	%	132	111	117	109	118
Total Positive PFHxS & PFOS	µg/kg	0.4	0.1	0.9	0.2	0.1
Total Positive PFOS & PFOA	µg/kg	0.6	0.8	1.2	0.2	1.2
Total Positive PFAS	µg/kg	0.6	4.5	1.2	0.2	6.8

PFAS in Soils Extended				
Our Reference		386894-33	386894-39	386894-97
Your Reference	UNITS	TP510	TP511	SDUP501
Depth		0-0.1	0-0.1	-
Date Sampled		22/07/2025	23/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	28/07/2025	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	28/07/2025	28/07/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	0.2	0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2	0.2
Perfluorohexanoic acid	µg/kg	0.1	<0.1	0.3
Perfluoroheptanoic acid	µg/kg	0.3	0.1	0.4
Perfluorooctanoic acid PFOA	µg/kg	1.2	0.3	1.1
Perfluorononanoic acid	µg/kg	0.4	0.1	0.3
Perfluorodecanoic acid	µg/kg	3	0.8	2
Perfluoroundecanoic acid	µg/kg	0.6	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	2	0.7	2
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	99	97	96
Surrogate $^{13}C_2$ *PFOA*	%	101	98	101
Extracted ISTD $^{13}C_3$ *PFBS*	%	108	103	101
Extracted ISTD $^{18}O_2$ *PFHxS*	%	103	104	104
Extracted ISTD $^{13}C_4$ *PFOS*	%	104	107	105

PFAS in Soils Extended				
Our Reference		386894-33	386894-39	386894-97
Your Reference	UNITS	TP510	TP511	SDUP501
Depth		0-0.1	0-0.1	-
Date Sampled		22/07/2025	23/07/2025	22/07/2025
Type of sample		Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	105	103	101
Extracted ISTD $^{13}C_3$ *PFPeA*	%	103	103	100
Extracted ISTD $^{13}C_2$ *PFHxA*	%	100	104	101
Extracted ISTD $^{13}C_4$ *PFHpA*	%	101	103	102
Extracted ISTD $^{13}C_4$ *PFOA*	%	103	107	103
Extracted ISTD $^{13}C_5$ *PFNA*	%	109	108	109
Extracted ISTD $^{13}C_2$ *PFDA*	%	107	107	102
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	107	105	105
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	111	112	107
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	125	122	124
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	112	111	111
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	115	122	113
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	122	128	117
Extracted ISTD $^{13}C_8$ *FOSA*	%	113	111	113
Extracted ISTD d_3 *N MeFOSA*	%	104	102	106
Extracted ISTD d_5 *N EtFOSA*	%	107	104	108
Extracted ISTD d_7 *N MeFOSE*	%	108	102	108
Extracted ISTD d_9 *N EtFOSE*	%	106	103	104
Extracted ISTD d_3 *N MeFOSAA*	%	113	102	105
Extracted ISTD d_5 *N EtFOSAA*	%	118	104	106
Total Positive PFHxS & PFOS	µg/kg	0.1	0.2	0.1
Total Positive PFOS & PFOA	µg/kg	1.3	0.5	1.2
Total Positive PFAS	µg/kg	7.6	2.2	6.9

PFAS in Soils Short			
Our Reference		386894-102	386894-105
Your Reference	UNITS	TB-501	TB-502
Depth		-	-
Date Sampled		22/07/2025	24/07/2025
Type of sample		Soil	Soil
Date prepared	-	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	28/07/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	100	103
Surrogate $^{13}C_2$ *PFOA*	%	97	102
Extracted ISTD $^{13}C_3$ *PFBS*	%	108	109
Extracted ISTD $^{18}O_2$ *PFHxS*	%	107	111
Extracted ISTD $^{13}C_4$ *PFOS*	%	107	101
Extracted ISTD $^{13}C_4$ *PFOA*	%	111	107
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	115	110
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	108	114
Total Positive PFHxS & PFOS	µg/kg	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1	<0.1
Total Positive PFAS	µg/kg	<0.1	<0.1

vTRH(C6-C10)/BTEXN in Water			
Our Reference		386894-104	386894-107
Your Reference	UNITS	FR-SHOVEL-501	FR-SHOVEL-502
Depth		-	-
Date Sampled		23/07/2025	25/07/2025
Type of sample		Water	Water
Date extracted	-	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025
TRH C_6 - C_9	µg/L	47	40
TRH C_6 - C_{10}	µg/L	58	48
TRH C_6 - C_{10} less BTEX (F1)	µg/L	58	48
Benzene	µg/L	<1	<1
Toluene	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
o-xylene	µg/L	<1	<1
Naphthalene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	108	109
Surrogate Toluene-d8	%	99	99
Surrogate 4-Bromofluorobenzene	%	100	100

svTRH (C10-C40) in Water			
Our Reference		386894-104	386894-107
Your Reference	UNITS	FR-SHOVEL-501	FR-SHOVEL-502
Depth		-	-
Date Sampled		23/07/2025	25/07/2025
Type of sample		Water	Water
Date extracted	-	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025
TRH C_{10} - C_{14}	µg/L	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50
TRH >C_{10} - C_{16}	µg/L	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50
Surrogate o-Terphenyl	%	87	93

PAHs in Water			
Our Reference		386894-104	386894-107
Your Reference	UNITS	FR-SHOVEL-501	FR-SHOVEL-502
Depth		-	-
Date Sampled		23/07/2025	25/07/2025
Type of sample		Water	Water
Date extracted	-	28/07/2025	28/07/2025
Date analysed	-	29/07/2025	29/07/2025
Naphthalene	µg/L	<0.1	<0.1
Acenaphthylene	µg/L	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	104	108

Metals in Waters - Acid extractable			
Our Reference		386894-104	386894-107
Your Reference	UNITS	FR-SHOVEL-501	FR-SHOVEL-502
Depth		-	-
Date Sampled		23/07/2025	25/07/2025
Type of sample		Water	Water
Date prepared	-	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	28/07/2025
Arsenic - Total	mg/L	<0.05	<0.05
Cadmium - Total	mg/L	<0.01	<0.01
Chromium - Total	mg/L	<0.01	<0.01
Copper - Total	mg/L	0.3	0.3
Lead - Total	mg/L	<0.03	<0.03
Mercury - Total	mg/L	<0.0005	<0.0005
Nickel - Total	mg/L	<0.02	<0.02
Zinc - Total	mg/L	0.04	0.03

PFAS in Waters Short			
Our Reference		386894-104	386894-107
Your Reference	UNITS	FR-SHOVEL-501	FR-SHOVEL-502
Depth		-	-
Date Sampled		23/07/2025	25/07/2025
Type of sample		Water	Water
Date prepared	-	28/07/2025	28/07/2025
Date analysed	-	28/07/2025	28/07/2025
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	100	100
Surrogate $^{13}C_2$ *PFOA*	%	95	100
Extracted ISTD $^{13}C_3$ *PFBS*	%	103	105
Extracted ISTD $^{18}O_2$ *PFHxS*	%	106	104
Extracted ISTD $^{13}C_4$ *PFOS*	%	107	104
Extracted ISTD $^{13}C_4$ *PFOA*	%	112	107
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	117	115
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	114	107
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01
Total Positive PFOA & PFOS	µg/L	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01

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.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation. Submission of low masses of sample e.g. for dust samples, may result in raised PQLs.
Metals-021	Determination of Mercury by Cold Vapour AAS.

Method ID	Methodology Summary
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-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. 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-022/025	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. 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/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
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	Water samples are analysed directly 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.

Method ID	Methodology Summary
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.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	386894-14
Date extracted	-			28/07/2025	5	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			29/07/2025	5	29/07/2025	29/07/2025		29/07/2025	29/07/2025
TRH C_6 - C_9	mg/kg	25	Org-023	<25	5	<25	<25	0	79	107
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	5	<25	<25	0	79	107
Benzene	mg/kg	0.2	Org-023	<0.2	5	<0.2	<0.2	0	79	105
Toluene	mg/kg	0.5	Org-023	<0.5	5	<0.5	<0.5	0	78	105
Ethylbenzene	mg/kg	1	Org-023	<1	5	<1	<1	0	84	115
m+p-xylene	mg/kg	2	Org-023	<2	5	<2	<2	0	78	104
o-Xylene	mg/kg	1	Org-023	<1	5	<1	<1	0	77	103
Naphthalene	mg/kg	1	Org-023	<1	5	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	105	5	84	76	10	75	104

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	386894-43
Date extracted	-			[NT]	30	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	30	29/07/2025	29/07/2025		29/07/2025	29/07/2025
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	30	<25	<25	0	115	106
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	30	<25	<25	0	115	106
Benzene	mg/kg	0.2	Org-023	[NT]	30	<0.2	<0.2	0	112	105
Toluene	mg/kg	0.5	Org-023	[NT]	30	<0.5	<0.5	0	113	102
Ethylbenzene	mg/kg	1	Org-023	[NT]	30	<1	<1	0	124	116
m+p-xylene	mg/kg	2	Org-023	[NT]	30	<2	<2	0	112	104
o-Xylene	mg/kg	1	Org-023	[NT]	30	<1	<1	0	110	103
Naphthalene	mg/kg	1	Org-023	[NT]	30	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	30	98	101	3	109	97

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	386894-83
Date extracted	-			[NT]	53	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	53	29/07/2025	29/07/2025		29/07/2025	29/07/2025
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	53	<25	<25	0	102	104
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	53	<25	<25	0	102	104
Benzene	mg/kg	0.2	Org-023	[NT]	53	<0.2	<0.2	0	105	102
Toluene	mg/kg	0.5	Org-023	[NT]	53	<0.5	<0.5	0	96	99
Ethylbenzene	mg/kg	1	Org-023	[NT]	53	<1	<1	0	115	113
m+p-xylene	mg/kg	2	Org-023	[NT]	53	<2	<2	0	98	102
o-Xylene	mg/kg	1	Org-023	[NT]	53	<1	<1	0	98	100
Naphthalene	mg/kg	1	Org-023	[NT]	53	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	53	97	97	0	95	99

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]	71	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	71	29/07/2025	29/07/2025		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	71	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	71	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	71	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	71	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	71	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	71	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	71	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	71	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	71	103	98	5	[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]	90	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	90	30/07/2025	30/07/2025		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	90	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	90	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	90	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	90	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	90	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	90	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	90	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	90	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	90	106	110	4	[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]	93	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	93	30/07/2025	30/07/2025		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	93	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	93	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	93	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	93	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	93	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	93	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	93	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	93	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	93	106	100	6	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	386894-14
Date extracted	-			28/07/2025	5	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			29/07/2025	5	29/07/2025	29/07/2025		28/07/2025	28/07/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	5	<50	<50	0	113	101
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	5	<100	<100	0	101	101
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	5	100	130	26	114	98
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	5	<50	<50	0	113	101
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	5	<100	120	18	101	101
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	5	140	170	19	114	98
Surrogate o-Terphenyl	%		Org-020	85	5	82	88	7	102	110

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	386894-43
Date extracted	-			[NT]	30	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	30	28/07/2025	28/07/2025		29/07/2025	29/07/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	30	<50	<50	0	112	102
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	30	<100	<100	0	101	100
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	30	<100	<100	0	100	100
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	30	<50	<50	0	112	102
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	30	<100	<100	0	101	100
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	30	<100	<100	0	100	100
Surrogate o-Terphenyl	%		Org-020	[NT]	30	87	85	2	105	100

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	386894-83
Date extracted	-			[NT]	53	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	53	29/07/2025	29/07/2025		28/07/2025	28/07/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	53	<50	<50	0	110	106
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	53	<100	<100	0	102	108
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	53	<100	<100	0	129	87
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	53	<50	<50	0	110	106
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	53	<100	<100	0	102	108
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	53	<100	<100	0	129	87
Surrogate o-Terphenyl	%		Org-020	[NT]	53	87	87	0	97	95

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	71	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	71	28/07/2025	28/07/2025		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	71	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	71	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	71	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	71	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	71	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	71	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	71	87	96	10	[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]	90	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	90	28/07/2025	28/07/2025		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	90	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	90	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	90	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	90	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	90	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	90	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	90	98	94	4	[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]	93	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	93	29/07/2025	29/07/2025		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	93	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	93	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	93	260	230	12	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	93	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	93	210	200	5	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	93	330	310	6	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	93	76	87	13	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	386894-14
Date extracted	-			28/07/2025	5	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			29/07/2025	5	29/07/2025	29/07/2025		29/07/2025	29/07/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	97	96
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	99	102
Fluorene	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	105	100
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	0.4	120	100	100
Anthracene	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	5	0.2	0.4	67	108	106
Pyrene	mg/kg	0.1	Org-022/025	<0.1	5	0.2	0.4	67	109	102
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	5	0.1	0.2	67	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	0.1	0	89	86
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	5	0.2	0.3	40	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	5	0.1	0.2	67	134	104
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	5	0.2	0.2	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	100	5	101	102	1	105	96

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	386894-43
Date extracted	-			[NT]	30	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	30	29/07/2025	29/07/2025		29/07/2025	29/07/2025
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	106	98
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	110	100
Fluorene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	108	100
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	0.4	120	94	80
Anthracene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	1	164	96	87
Pyrene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	1.0	164	94	83
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	0.6	143	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	0.5	133	96	84
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	30	<0.2	0.8	120	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	30	<0.05	0.56	167	114	104
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	0.3	100	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	0.3	100	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	30	104	99	5	86	78

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	386894-83
Date extracted	-			[NT]	53	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	53	29/07/2025	29/07/2025		29/07/2025	29/07/2025
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	101	98
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	103	100
Fluorene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	105	102
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	87	106
Anthracene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	91	110
Pyrene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	91	108
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	91	88
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	53	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	53	<0.05	<0.05	0	112	104
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	53	102	102	0	79	101

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	71	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	71	29/07/2025	29/07/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	71	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	71	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	71	103	101	2	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	90	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	90	29/07/2025	29/07/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	90	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	90	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	90	91	91	0	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	93	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	93	29/07/2025	29/07/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	93	0.2	0.2	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	93	0.2	0.2	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	93	0.1	0.2	67	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	93	0.1	0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	93	0.3	0.3	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	93	0.2	0.2	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	93	0.1	0.2	67	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	93	0.3	0.3	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	93	98	97	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	386894-14
Date extracted	-			28/07/2025	5	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			29/07/2025	5	29/07/2025	29/07/2025		29/07/2025	29/07/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	112	104
HCB	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	106	98
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	108	104
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	86	80
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	114	112
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	104	100
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	114	108
Endrin	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	106	110
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	110	110
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	108	112
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	105	5	100	105	5	100	97

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	386894-43
Date extracted	-			[NT]	30	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	30	29/07/2025	29/07/2025		29/07/2025	29/07/2025
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	112	104
HCB	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	110	98
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	88	82
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	72	64
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	106	92
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	90	80
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	100	88
Endrin	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	94	88
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	100	92
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	98	90
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	30	107	102	5	107	100

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	386894-83
Date extracted	-			[NT]	53	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	53	29/07/2025	29/07/2025		29/07/2025	29/07/2025
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	105	104
HCB	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	103	100
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	77	100
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	67	82
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	102	122
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	87	104
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	95	112
Endrin	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	86	106
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	95	114
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	89	106
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	53	105	106	1	103	103

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	71	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	71	29/07/2025	29/07/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	71	109	107	2	[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]	93	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	93	29/07/2025	29/07/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	93	99	96	3	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	386894-14
Date extracted	-			28/07/2025	5	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			29/07/2025	5	29/07/2025	29/07/2025		29/07/2025	29/07/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	124	128
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	108	106
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	118	132
Malathion	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	120	132
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	118	118
Fenthion	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	106	122
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	106	128
Phosalone	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	105	5	100	105	5	100	97

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	386894-43
Date extracted	-			[NT]	30	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	30	29/07/2025	29/07/2025		29/07/2025	29/07/2025
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	140	132
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	94	84
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	116	114
Malathion	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	122	114
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	108	98
Fenthion	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	106	104
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	120	114
Phosalone	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	30	107	102	5	107	100

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	386894-83
Date extracted	-			[NT]	53	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	53	29/07/2025	29/07/2025		29/07/2025	29/07/2025
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	132	128
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	89	106
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	108	126
Malathion	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	114	132
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	104	122
Fenthion	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	99	118
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	121	134
Phosalone	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	53	105	106	1	103	103

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	71	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	71	29/07/2025	29/07/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	71	109	107	2	[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]	93	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	93	29/07/2025	29/07/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	93	99	96	3	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	386894-14
Date extracted	-			28/07/2025	5	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			29/07/2025	5	29/07/2025	29/07/2025		29/07/2025	29/07/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	5	<0.1	<0.1	0	131	100
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	5	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	102	5	97	102	5	96	92

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	386894-43
Date extracted	-			[NT]	30	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	30	29/07/2025	29/07/2025		29/07/2025	29/07/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	30	<0.1	<0.1	0	104	80
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	30	101	97	4	100	94

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	386894-83
Date extracted	-			[NT]	53	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	53	29/07/2025	29/07/2025		29/07/2025	29/07/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	53	<0.1	<0.1	0	99	120
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	53	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	53	101	102	1	95	96

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	71	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	71	29/07/2025	29/07/2025		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	71	103	100	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]	93	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	93	29/07/2025	29/07/2025		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	93	96	95	1	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	386894-14
Date prepared	-			28/07/2025	5	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			30/07/2025	5	30/07/2025	30/07/2025		30/07/2025	30/07/2025
Arsenic	mg/kg	4	Metals-020	<4	5	5	<4	22	104	91
Cadmium	mg/kg	0.4	Metals-020	<0.4	5	<0.4	<0.4	0	95	79
Chromium	mg/kg	1	Metals-020	<1	5	14	14	0	99	87
Copper	mg/kg	1	Metals-020	<1	5	25	23	8	102	96
Lead	mg/kg	1	Metals-020	<1	5	24	17	34	102	83
Mercury	mg/kg	0.1	Metals-021	<0.1	5	<0.1	<0.1	0	107	109
Nickel	mg/kg	1	Metals-020	<1	5	14	11	24	105	87
Zinc	mg/kg	1	Metals-020	<1	5	46	40	14	98	73

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	386894-43
Date prepared	-			[NT]	30	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	30	30/07/2025	30/07/2025		30/07/2025	30/07/2025
Arsenic	mg/kg	4	Metals-020	[NT]	30	13	26	67	105	102
Cadmium	mg/kg	0.4	Metals-020	[NT]	30	<0.4	<0.4	0	95	87
Chromium	mg/kg	1	Metals-020	[NT]	30	14	10	33	99	97
Copper	mg/kg	1	Metals-020	[NT]	30	28	24	15	102	106
Lead	mg/kg	1	Metals-020	[NT]	30	24	19	23	102	96
Mercury	mg/kg	0.1	Metals-021	[NT]	30	<0.1	<0.1	0	111	82
Nickel	mg/kg	1	Metals-020	[NT]	30	18	15	18	105	101
Zinc	mg/kg	1	Metals-020	[NT]	30	62	54	14	97	89

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	386894-83
Date prepared	-			[NT]	53	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			[NT]	53	30/07/2025	30/07/2025		30/07/2025	30/07/2025
Arsenic	mg/kg	4	Metals-020	[NT]	53	9	11	20	99	91
Cadmium	mg/kg	0.4	Metals-020	[NT]	53	<0.4	<0.4	0	90	76
Chromium	mg/kg	1	Metals-020	[NT]	53	13	17	27	93	87
Copper	mg/kg	1	Metals-020	[NT]	53	16	19	17	95	97
Lead	mg/kg	1	Metals-020	[NT]	53	21	24	13	96	85
Mercury	mg/kg	0.1	Metals-021	[NT]	53	<0.1	<0.1	0	130	114
Nickel	mg/kg	1	Metals-020	[NT]	53	6	9	40	99	89
Zinc	mg/kg	1	Metals-020	[NT]	53	38	49	25	92	76

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	71	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	71	30/07/2025	30/07/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	71	8	7	13	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	71	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	71	21	19	10	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	71	17	16	6	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	71	26	25	4	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	71	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	71	10	9	11	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	71	31	30	3	[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]	90	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	90	30/07/2025	30/07/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	90	5	6	18	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	90	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	90	5	5	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	90	4	3	29	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	90	7	7	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	90	0.2	0.2	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	90	3	2	40	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	90	15	7	73	[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]	93	28/07/2025	28/07/2025		[NT]	[NT]
Date analysed	-			[NT]	93	30/07/2025	30/07/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	93	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	93	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	93	15	17	12	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	93	29	23	23	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	93	22	69	103	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	93	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	93	11	10	10	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	93	39	83	72	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	386894-14
Date prepared	-			28/07/2025	5	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Date analysed	-			28/07/2025	5	28/07/2025	28/07/2025		28/07/2025	28/07/2025
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	105	102
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	108	108
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	107	100
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	109	105
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	5	0.4	0.3	29	105	109
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	5	<0.2	<0.2	0	94	108
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	5	<0.2	<0.2	0	104	101
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	5	<0.2	<0.2	0	113	105
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	110	104
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	106	99
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	5	0.2	0.1	67	106	99
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	104	103
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	5	<0.5	<0.5	0	107	88
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	5	<0.5	<0.5	0	103	100
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	5	<0.5	<0.5	0	104	104
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	5	<0.5	<0.5	0	91	112
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	5	<5	<5	0	115	112
4:2 FTS	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	113	104
6:2 FTS	µg/kg	0.1	Org-029	<0.1	5	<0.1	<0.1	0	106	105
8:2 FTS	µg/kg	0.2	Org-029	<0.2	5	<0.2	<0.2	0	102	104
10:2 FTS	µg/kg	0.2	Org-029	<0.2	5	<0.2	<0.2	0	113	122
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	5	<1	<1	0	108	106
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	5	<1	<1	0	110	105
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	5	<1	<1	0	102	95
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	5	<1	<1	0	109	102
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	5	<5	<5	0	110	105
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	5	<0.2	<0.2	0	104	107
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	5	<0.2	<0.2	0	106	102
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	102	5	98	103	5	100	98
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	98	5	98	99	1	101	97

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	386894-14
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	117	5	105	108	3	114	107
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	109	5	102	106	4	110	105
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	109	5	108	103	5	114	103
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	111	5	105	106	1	110	102
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	111	5	107	105	2	110	104
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	108	5	103	103	0	107	102
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	109	5	104	106	2	110	103
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	112	5	106	106	0	110	106
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	111	5	110	110	0	112	104
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	108	5	113	113	0	110	111
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	103	5	112	109	3	104	107
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	97	5	115	116	1	104	109
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	85	5	122	119	2	81	115
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	115	5	111	112	1	108	106
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	114	5	125	119	5	114	114
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	114	5	141	145	3	120	123
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	119	5	115	116	1	115	109
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	110	5	103	105	2	112	101
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	113	5	108	107	1	115	108
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	118	5	107	104	3	113	106

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	386894-14
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	111	5	103	105	2	109	101
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	82	5	119	124	4	80	104
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	67	5	132	135	2	66	110

QUALITY CONTROL: PFAS in Soils Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	
Date prepared	-			28/07/2025	[NT]	[NT]	[NT]	[NT]	28/07/2025	[NT]
Date analysed	-			28/07/2025	[NT]	[NT]	[NT]	[NT]	28/07/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	117	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	120	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			28/07/2025	104	28/07/2025	29/07/2025		28/07/2025	[NT]
Date analysed	-			29/07/2025	104	29/07/2025	30/07/2025		29/07/2025	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	104	47	54	14	99	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	104	58	57	2	99	[NT]
Benzene	µg/L	1	Org-023	<1	104	<1	<1	0	95	[NT]
Toluene	µg/L	1	Org-023	<1	104	<1	<1	0	98	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	104	<1	<1	0	100	[NT]
m+p-xylene	µg/L	2	Org-023	<2	104	<2	<2	0	102	[NT]
o-xylene	µg/L	1	Org-023	<1	104	<1	<1	0	102	[NT]
Naphthalene	µg/L	1	Org-023	<1	104	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	104	104	108	107	1	110	[NT]
Surrogate Toluene-d8	%		Org-023	98	104	99	99	0	100	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	99	104	100	101	1	103	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W5	[NT]
Date extracted	-			28/07/2025	[NT]	[NT]	[NT]	[NT]	28/07/2025	[NT]
Date analysed	-			29/07/2025	[NT]	[NT]	[NT]	[NT]	29/07/2025	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	111	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	111	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	111	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	111	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate o-Terphenyl	%		Org-020	118	[NT]	[NT]	[NT]	[NT]	82	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			28/07/2025	[NT]	[NT]	[NT]	[NT]	28/07/2025	[NT]
Date analysed	-			29/07/2025	[NT]	[NT]	[NT]	[NT]	29/07/2025	[NT]
Naphthalene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Acenaphthylene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
Fluorene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	81	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	83	[NT]
Anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	81	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	101	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: Metals in Waters - Acid extractable						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			28/07/2025	[NT]	[NT]	[NT]	[NT]	28/07/2025	[NT]
Date analysed	-			28/07/2025	[NT]	[NT]	[NT]	[NT]	28/07/2025	[NT]
Arsenic - Total	mg/L	0.05	Metals-020	<0.05	[NT]	[NT]	[NT]	[NT]	101	[NT]
Cadmium - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	98	[NT]
Chromium - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	97	[NT]
Copper - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	95	[NT]
Lead - Total	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	103	[NT]
Mercury - Total	mg/L	0.0005	Metals-021	<0.0005	[NT]	[NT]	[NT]	[NT]	100	[NT]
Nickel - Total	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	98	[NT]
Zinc - Total	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	97	[NT]

QUALITY CONTROL: PFAS in Waters Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			28/07/2025	104	28/07/2025	28/07/2025		28/07/2025	[NT]
Date analysed	-			28/07/2025	104	28/07/2025	28/07/2025		28/07/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	104	<0.01	<0.01	0	103	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	104	<0.01	<0.01	0	100	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	104	<0.01	<0.01	0	98	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	104	<0.01	<0.01	0	99	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	104	<0.01	<0.01	0	102	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	104	<0.02	<0.02	0	100	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	105	104	100	101	1	99	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	97	104	95	105	10	98	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	110	104	103	107	4	101	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	106	104	106	103	3	103	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	103	104	107	103	4	108	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	110	104	112	101	10	108	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	119	104	117	114	3	112	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	119	104	114	116	2	119	[NT]

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.

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.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

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.

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.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

PAHs in Soil - The RPD for duplicate results is accepted due to the non homogenous nature of sample 386894-30.

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 386894-90 for Zn. Therefore a triplicate result has been issued as laboratory sample number 386894-108.
- The laboratory RPD acceptance criteria has been exceeded for 386894-93 for Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 386894-109.

Asbestos-ID in soil: NEPM
This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

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customerservice@envirolab.com.au
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SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Vittal Boggaram

Sample Login Details

Your reference	E37757B Rouse Hill Hospital
Envirolab Reference	386894
Date Sample Received	25/07/2025
Date Instructions Received	25/07/2025
Date Results Expected to be Reported	01/08/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	105 Soil, 2 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	4
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils NEPM - ASB-001	PFAS in Soils Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters - Acid extractable	PFAS in Waters Short	On Hold
TP501-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP501-0.2-0.3															✓
TP501-0.4-0.5															✓
TP501-0.5-0.6															✓
TP502-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓						
TP502-0.2-0.3	✓	✓	✓				✓								
TP502-0.5-0.6															✓
TP502-0.9-1.0															✓
TP502-1.2-1.3															✓
TP503-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP503-0.2-0.3															✓
TP503-0.6-0.7															✓
TP504-0-0.1															✓
TP504-0.2-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓						
TP504-0.6-0.7															✓
TP505-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓						
TP505-0.4-0.5	✓	✓	✓				✓								
TP505-0.9-1.0															✓
TP505-1.7-1.8															✓
TP506-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓						
TP506-0.4-0.5	✓	✓	✓				✓								
TP506-1.0-1.1															✓
TP506-1.8-1.9															✓
TP506-1.9-2.0															✓
TP507-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP507-0.3-0.4															✓
TP507-0.5-0.6															✓
TP508-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP508-0.4-0.5															✓
TP509-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓						
TP509-0.3-0.4															✓
TP509-0.7-0.8															✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils NEPM - ASB-001	PFAS in Soils Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters - Acid extractable	PFAS in Waters Short	On Hold
TP510-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓						
TP510-0.6-0.7	✓	✓	✓				✓								
TP510-1.4-1.5															✓
TP510-1.9-2.0															✓
TP510-2.3-2.4															✓
TP510-2.7-2.8															✓
TP511-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓						
TP511-0.1-0.2															✓
TP511-0.3-0.4	✓	✓	✓				✓								
TP511-0.5-0.6															✓
TP512-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP512-0.3-0.4															✓
TP512-0.7-0.8															✓
TP513-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP513-0.4-0.5															✓
TP514-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP514-0.2-0.3															✓
TP515-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP515-0.2-0.3	✓	✓	✓				✓								
TP515-0.6-0.7															✓
TP516-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP516-0.3-0.4															✓
TP516-0.6-0.7															✓
TP517-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP517-0.3-0.4															✓
TP518-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP518-0.3-0.4															✓
TP519-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP519-0.3-0.4															✓
TP520-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP520-0.3-0.4															✓
TP521-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils NEPM - ASB-001	PFAS in Soils Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters - Acid extractable	PFAS in Waters Short	On Hold
TP521-0.4-0.5															✓
TP522-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP522-0.3-0.4	✓	✓	✓				✓								
TP522-0.5-0.6															✓
TP523-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP523-0.3-0.4															✓
TP524-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP524-0.3-0.4															✓
TP525-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP525-0.4-0.5															✓
TP526-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP526-0.3-0.4															✓
TP526-0.7-0.8															✓
TP527-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP527-0.2-0.3															✓
TP527-0.7-0.8															✓
TP528-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP528-0.3-0.4															✓
TP529-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP529-0.2-0.3															✓
TP530-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP530-0.3-0.4	✓	✓	✓				✓								
TP530-0.7-0.8															✓
TP530-1.2-1.3															✓
TP531-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP531-0.2-0.3	✓	✓	✓				✓								
TP531-0.4-0.5															✓
TP531-0.6-0.7															✓
TP532-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓							
TP532-0.2-0.3	✓	✓	✓				✓								
TP532-0.5-0.6															✓
TP532-0.9-1.0															✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils NEPM - ASB-001	PFAS in Soils Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters - Acid extractable	PFAS in Waters Short	On Hold
SDUP501	✓	✓	✓	✓	✓	✓	✓		✓						
SDUP503	✓	✓	✓	✓	✓	✓	✓								
SDUP505															✓
SDUP506															✓
SDUP507	✓	✓	✓				✓								
TB-501	✓	✓	✓	✓	✓	✓	✓		✓						
TS-501	✓														
FR-SHOVEL-501										✓	✓	✓	✓	✓	
TB-502	✓	✓	✓	✓	✓	✓	✓		✓						
TS-502	✓														
FR-SHOVEL-502										✓	✓	✓	✓	✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:	JKE Job Number: E37757B	FROM: JKEnvironments
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201	Date Results Required: STANDARD	REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001
Attention: Aileen	Page: 1 of 5	Attention: Vittal Boggaram vboggaram@jkenvironments.com.au

Location:	Rouse Hill Hospital (Main Hospital Site)	Sample Preserved in Esky on Ice
Sampler:	VR	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 6	Combo 6a	Combo 3	Asbestos (detection)	BTEX	PFAS (extended)	PFAS (short)				
25/07/2025	1	TP501	0-0.1	G, A	3.1	F: Silty Clay	X											
25/07/2025	2	TP501	0.2-0.3	G, A	0.4	Silty Clay												
25/07/2025	3	TP501	0.4-0.5	G, A	0.3	Silty Clay												
25/07/2025	4	TP501	0.5-0.6	G, A	0.2	XW Siltstone												
22/07/2025	5	TP502	0-0.1	G, A, Pfas	0.1	F: Silty Gravel	X						X					
22/07/2025	6	TP502	0.2-0.3	G, A, Pfas	0.3	F: Silty Clay				X								
22/07/2025	7	TP502	0.5-0.6	G, A, Pfas	0.2	F: Silty Clay												
22/07/2025	8	TP502	0.9-1.0	G, A, Pfas	0.3	F: Silty Clay												
22/07/2025	9	TP502	1.2-1.3	G, A, Pfas	0.2	XW Siltstone												
25/07/2025	10	TP503	0-0.1	G, A	0	F: Silty Clay	X											
25/07/2025	11	TP503	0.2-0.3	G, A	0	F: Silty Clay												
25/07/2025	12	TP503	0.6-0.7	G, A	0	Silty Clay												
22/07/2025	13	TP504	0-0.1	G, A, Pfas	0.1	F: Silty Clay												
22/07/2025	14	TP504	0.2-0.1	G, A, Pfas	0.3	F: Silty Clay	X						X					
22/07/2025	15	TP504	0.6-0.7	G, A, Pfas	0.1	Silty Clay												
23/07/2025	16	TP505	0-0.1	G, A, Pfas	0.1	F: Silty Clay	X						X					
23/07/2025	17	TP505	0.4-0.5	G, A, Pfas	0.1	F: Silty Clay				X								
23/07/2025	18	TP505	0.9-1.0	G, A, Pfas	0.1	F: Silty Clay												
23/07/2025	19	TP505	1.7-1.8	G, A, Pfas	0.3	XW Siltstone												
23/07/2025	20	TP506	0-0.1	G, A, Pfas	0.1	F: Silty Clay	X						X					
23/07/2025	21	TP506	0.4-0.5	G, A, Pfas	0.1	F: Silty Clay				X								
23/07/2025	22	TP506	1.0-1.1	G, A, Pfas	0.1	F: Silty Clay												
23/07/2025	23	TP506	1.8-1.9	G, A, Pfas	0.1	F: Silty Clay												
23/07/2025	24	TP506	1.9-2.0	G, A, Pfas	0.1	XW Siltstone												
23/07/2025	25	TP507	0-0.1	G, A	0.1	F: Silty Clayey Gravel	X											

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag			
Relinquished By: VB	Date: 25/07/25	Time: 14:00	Received By: O.W	Date: 25/7/25

Envirolab Services
12 Ashley St
Chatsworth NSW 2067
Ph: (02) 9910 6200
Job No: 268894
Date Received: 25/7/25
Time Received: 1540
Received By: OW
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E37757B Date Results Required: STANDARD Page: 2 of 5	**FROM:** JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Vittal Boggaram vboggaram@jkenvironments.com.au

Location: Rouse Hill Hospital (Main Hospital Site)

Sampler: VR

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 6	Combo 6a	Combo 3	Asbestos (detection)	BTEX	PFAS (extended)	PFAS (short)				
23/07/2025	26	TP507	0.3-0.4	G, A	0.1	F: Silty Clay												
23/07/2025	27	TP507	0.5-0.6	G, A	0.2	XW Siltstone												
25/07/2025	28	TP508	0-0.1	G, A	0	F: Silty Clay	X											
25/07/2025	29	TP508	0.4-0.5	G, A	0	Silty Clay												
22/07/2025	30	TP509	0-0.1	G, A, Pfas	0.1	F: Silty Clay	X						X					
22/07/2025	31	TP509	0.3-0.4	G, A, Pfas	0.1	Silty Clay												
22/07/2025	32	TP509	0.7-0.8	G, A, Pfas	0.2	XW Siltstone												
22/07/2025	33	TP510	0-0.1	G, A, Pfas	0.1	F: Silty Clay	X						X					
22/07/2025	34	TP510	0.6-0.7	G, A, Pfas	0.1	F: Silty Clay				X								
22/07/2025	35	TP510	1.4-1.5	G, A, Pfas	0.2	F: Silty Clay												
22/07/2025	36	TP510	1.9-2.0	G, A, Pfas	0.1	F: Silty Clay												
22/07/2025	37	TP510	2.3-2.4	G, A, Pfas	0.2	F: Silty Clay												
22/07/2025	38	TP510	2.7-2.8	G, A, Pfas	0.2	F: Silty Clay												
23/07/2025	39	TP511	0-0.1	G, A, Pfas	0.1	F: Silty Clay	X						X					
23/07/2025	40	TP511	0.1-0.2	G, A, Pfas	0.2	F: Silty Clay												
23/07/2025	41	TP511	0.3-0.4	G, A, Pfas	0.1	F: Silty Clay				X								
23/07/2025	42	TP511	0.5-0.6	G, A, Pfas	0.1	XW Siltstone												
25/07/2025	43	TP512	0-0.1	G, A	0	F: Silty Clay	X											
25/07/2025	44	TP512	0.3-0.4	G, A	0	F: Silty Clay												
25/07/2025	45	TP512	0.7-0.8	G, A	0	XW Siltstone												
22/07/2025	46	TP513	0-0.1	G, A	0.1	F: Silty Clay	X											
22/07/2025	47	TP513	0.4-0.5	G, A	0.1	Silty Clay												
22/07/2025	48	TP514	0-0.1	G, A	0.1	F: Silty Clay	X											
22/07/2025	49	TP514	0.2-0.3	G, A	0.1	Silty Clay												
23/07/2025	50	TP515	0-0.1	G, A	0.1	F: Silty Clay	X											

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By: VB	Date: 25/07/25	Time: 14:00	Received By:	Date:

3868914
25/7/25
CN

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E37757B Date Results Required: STANDARD Page: 3 of 5	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Vittal Boggaram vboggaram@jkenvironments.com.au

Location:	Rouse Hill Hospital (Main Hospital Site)						Sample Preserved in Esky on Ice											
Sampler:	VR						Tests Required											
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 6	Combo 6a	Combo 3	Asbestos (detection)	BTEX	PFAS (extended)	PFAS (short)				
23/07/2025	51	TP515	0.2-0.3	G, A	0.1	F: Silty Clay				X								
23/07/2025	52	TP515	0.6-0.7	G, A	0.2	XW Siltstone												
25/07/2025	53	TP516	0-0.1	G, A	0	F: Silty Clay	X											
25/07/2025	54	TP516	0.3-0.4	G, A	0	F: Silty Clay												
25/07/2025	55	TP516	0.6-0.7	G, A	0	Silty Clay												
23/07/2025	56	TP517	0-0.1	G, A	0.3	F: Silty Clay	X											
23/07/2025	57	TP517	0.3-0.4	G, A	1.5	Silty Clay												
23/07/2025	58	TP518	0-0.1	G, A	0.2	F: Silty Clay	X											
23/07/2025	59	TP518	0.3-0.4	G, A	0.2	Silty Clay												
23/07/2025	60	TP519	0-0.1	G, A	0.2	F: Silty Clay	X											
23/07/2025	61	TP519	0.3-0.4	G, A	0.2	XW Siltstone												
24/07/2025	62	TP520	0-0.1	G, A	0	F: Silty Clay	X											
24/07/2025	63	TP520	0.3-0.4	G, A	0.1	Silty Clay												
23/07/2025	64	TP521	0-0.1	G, A	0.2	F: Silty Sandy Clay	X											
23/07/2025	65	TP521	0.4-0.5	G, A	0.1	Silty Clay												
23/07/2025	66	TP522	0-0.1	G, A	0.3	F: Silty Clay	X											
23/07/2025	67	TP522	0.3-0.4	G, A	0.2	F: Silty Clay				X								
23/07/2025	68	TP522	0.5-0.6	G, A	0.2	Silty Clay												
23/07/2025	69	TP523	0-0.1	G, A	0.3	F: Silty Clayey Gravel	X											
23/07/2025	70	TP523	0.3-0.4	G, A	0.2	Silty Clay												
24/07/2025	71	TP524	0-0.1	G, A	0.1	F: Silty Clay	X											
24/07/2025	72	TP524	0.3-0.4	G, A	0	Silty Clay												
24/07/2025	73	TP525	0-0.1	G, A	0	F: Silty Clay	X											
24/07/2025	74	TP525	0.4-0.5	G, A	0	Silty Clay												
24/07/2025	75	TP526	0-0.1	G, A	0	F: Silty Clay	X											

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag

Relinquished By: VB	Date: 25/07/25	Time: 14:00	Received By:	Date:

386894
25/7/25
CW

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E37757B Date Results Required: STANDARD Page: 4 of 5	**FROM:** JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Vittal Boggaram vboggaram@jkenvironments.com.au

Location:	Rouse Hill Hospital (Main Hospital Site)
Sampler:	VR

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 6	Combo 6a	Combo 3	Asbestos (detection)	BTEX	PFAS (extended)	PFAS (short)				
24/07/2025	76	TP526	0.3-0.4	G, A	0	Silty Clay												
24/07/2025	77	TP526	0.7-0.8	G, A	0	XW Siltstone												
24/07/2025	78	TP527	0-0.1	G, A	0.1	F: Silty Clay	X											
24/07/2025	79	TP527	0.2-0.3	G, A	0	F: Silty Clay												
24/07/2025	80	TP527	0.7-0.8	G, A	0	Silty Clay												
24/07/2025	81	TP528	0-0.1	G, A	0	F: Silty Clay	X											
24/07/2025	82	TP528	0.3-0.4	G, A	0	Silty Clay												
24/07/2025	83	TP529	0-0.1	G, A	0	F: Silty Clay	X											
24/07/2025	84	TP529	0.2-0.3	G, A	0	Silty Clay												
24/07/2025	85	TP530	0-0.1	G, A	0	F: Silty Clay	X											
24/07/2025	86	TP530	0.3-0.4	G, A	0	F: Silty Clay				X								
24/07/2025	87	TP530	0.7-0.8	G, A	0	F: Silty Clay												
24/07/2025	88	TP530	1.2-1.3	G, A	0	Silty Clay												
24/07/2025	89	TP531	0-0.1	G, A	0	F: Silty Clayey Sand	X											
24/07/2025	90	TP531	0.2-0.3	G, A	0.1	F: Silty Clayey Sand				X								
24/07/2025	91	TP531	0.4-0.5	G, A	0	F: Silty Clay												
24/07/2025	92	TP531	0.6-0.7	G, A	0	XW Siltstone												
24/07/2025	93	TP532	0-0.1	G, A	0	F: Silty Clayey Gravel	X											
24/07/2025	94	TP532	0.2-0.3	G, A	0	F: Silty Clayey Gravel				X								
24/07/2025	95	TP532	0.5-0.6	G, A	0	F: Silty Clay												
24/07/2025	96	TP532	0.9-1.0	G, A	0	Silty Clay												
22/07/2025	97	SDUP501	-	G, Pfas	-	Duplicate		X					X					
23/07/2025	510	SDUP502	-	G, Pfas	-	Duplicate		X					X	PLEASE SEND TO VIC				
23/07/2025	98	SDUP503	-	G	-	Duplicate		X										
23/07/2025	510	SDUP504	-	G	-	Duplicate		X						PLEASE SEND TO VIC				

Remarks (comments/detection limits required):		**Sample Containers:** G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag	
Relinquished By: VB	**Date:** 25/07/25	**Time:** 14:00	**Received By:** **Date:**

368944
25/7/17
CW

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E37757B Date Results Required: STANDARD Page: 5 of 5	FROM: JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Vittal Boggaram vboggaram@jkenvironments.com.au

Location:	Rouse Hill Hospital (Main Hospital Site)						Sample Preserved in Esky on Ice												
Sampler:	VR						Tests Required												
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 6	Combo 6a	Combo 3	Asbestos (detection)	BTEX	PFAS (short)						
24/07/2025	99	SDUP505	-	G	-	Duplicate													
24/07/2025	100	SDUP506	-	G	-	Duplicate													
25/07/2025	101	SDUP507	-	G	-	Duplicate				X									
25/07/2025	510	SDUP508	-	G	-	Duplicate				X	PLEASE SEND TO VIC								
22/07/2025	102	TB-501	-	V, Pfas	-	Trip Blank		X					X						
22/07/2025	103	TS-501	-	V	-	Trip Spike						X							
23/07/2025	104	FR-SHOVEL-501	-	#3, Pfas	-	Rinsate				X			X						
24/07/2025	105	TB-502	-	V, Pfas	-	Trip Blank		X					X						
24/07/2025	106	TS-502	-	V	-	Trip Spike						X							
25/07/2025	107	FR-SHOVEL-502	-	#3, Pfas	-	Rinsate				X			X						

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag			
Relinquished By: VB	Date: 25/07/25	Time: 14:00	Received By:	Date:

386894
25/7/25

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CERTIFICATE OF ANALYSIS 386894-A

Client Details

Client	JK Environments
Attention	Vittal Boggaram
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E37757B Rouse Hill Hospital**
Number of Samples	Additional analysis
Date samples received	25/07/2025
Date completed instructions received	06/08/2025

Analysis Details

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

Samples were analysed as received from the client unless as indicated below in the method summaries. 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	13/08/2025
Date of Issue	11/08/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Amanda Chui, LC/Air Toxics Supervisor
Liam Timmins, Organics Supervisor
Loren Bardwell, Development Chemist
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		386894-A-11	386894-A-13
Your Reference	UNITS	TP503	TP504
Depth		0.2-0.3	0-0.1
Date Sampled		25/07/2025	22/07/2025
Type of sample		Soil	Soil
Date extracted	-	07/08/2025	07/08/2025
Date analysed	-	08/08/2025	08/08/2025
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
Naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	95

svTRH (C10-C40) in Soil			
Our Reference		386894-A-11	386894-A-13
Your Reference	UNITS	TP503	TP504
Depth		0.2-0.3	0-0.1
Date Sampled		25/07/2025	22/07/2025
Type of sample		Soil	Soil
Date extracted	-	07/08/2025	07/08/2025
Date analysed	-	08/08/2025	08/08/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	78	79

PAHs in Soil			
Our Reference		386894-A-11	386894-A-13
Your Reference	UNITS	TP503	TP504
Depth		0.2-0.3	0-0.1
Date Sampled		25/07/2025	22/07/2025
Type of sample		Soil	Soil
Date extracted	-	07/08/2025	07/08/2025
Date analysed	-	08/08/2025	08/08/2025
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	98	82

Organochlorine Pesticides in soil		
Our Reference		386894-A-13
Your Reference	UNITS	TP504
Depth		0-0.1
Date Sampled		22/07/2025
Type of sample		Soil
Date extracted	-	07/08/2025
Date analysed	-	08/08/2025
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Mirex	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	88

Organophosphorus Pesticides in Soil		
Our Reference		386894-A-13
Your Reference	UNITS	TP504
Depth		0-0.1
Date Sampled		22/07/2025
Type of sample		Soil
Date extracted	-	07/08/2025
Date analysed	-	08/08/2025
Dichlorvos	mg/kg	<0.1
Mevinphos	mg/kg	<0.1
Phorate	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Disulfoton	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Parathion-Methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenthion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Methidathion	mg/kg	<0.1
Fenamiphos	mg/kg	<0.1
Ethion	mg/kg	<0.1
Phosalone	mg/kg	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1
Coumaphos	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	88

PCBs in Soil		
Our Reference		386894-A-13
Your Reference	UNITS	TP504
Depth		0-0.1
Date Sampled		22/07/2025
Type of sample		Soil
Date extracted	-	07/08/2025
Date analysed	-	08/08/2025
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-Fluorobiphenyl	%	88

Acid Extractable metals in soil			
Our Reference		386894-A-11	386894-A-13
Your Reference	UNITS	TP503	TP504
Depth		0.2-0.3	0-0.1
Date Sampled		25/07/2025	22/07/2025
Type of sample		Soil	Soil
Date prepared	-	07/08/2025	07/08/2025
Date analysed	-	07/08/2025	07/08/2025
Arsenic	mg/kg	6	14
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	10	12
Copper	mg/kg	25	22
Lead	mg/kg	25	22
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	24	18
Zinc	mg/kg	97	69

Moisture			
Our Reference		386894-A-11	386894-A-13
Your Reference	UNITS	TP503	TP504
Depth		0.2-0.3	0-0.1
Date Sampled		25/07/2025	22/07/2025
Type of sample		Soil	Soil
Date prepared	-	07/08/2025	07/08/2025
Date analysed	-	08/08/2025	08/08/2025
Moisture	%	15	11

PFAS in Soils Extended		
Our Reference		386894-A-13
Your Reference	UNITS	TP504
Depth		0-0.1
Date Sampled		22/07/2025
Type of sample		Soil
Date prepared	-	08/08/2025
Date analysed	-	08/08/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2
Perfluorobutanoic acid	µg/kg	0.2
Perfluoropentanoic acid	µg/kg	0.2
Perfluorohexanoic acid	µg/kg	0.3
Perfluoroheptanoic acid	µg/kg	0.5
Perfluorooctanoic acid PFOA	µg/kg	1.1
Perfluorononanoic acid	µg/kg	0.2
Perfluorodecanoic acid	µg/kg	2
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	2
Perfluorotridecanoic acid	µg/kg	<0.5
Perfluorotetradecanoic acid	µg/kg	<5
4:2 FTS	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
10:2 FTS	µg/kg	<0.2
Perfluorooctane sulfonamide	µg/kg	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	96
Surrogate $^{13}C_2$ *PFOA*	%	105
Extracted ISTD $^{13}C_3$ *PFBS*	%	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%	101
Extracted ISTD $^{13}C_4$ *PFOS*	%	96

PFAS in Soils Extended		
Our Reference		386894-A-13
Your Reference	UNITS	TP504
Depth		0-0.1
Date Sampled		22/07/2025
Type of sample		Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	101
Extracted ISTD $^{13}C_3$ *PFPeA*	%	100
Extracted ISTD $^{13}C_2$ *PFHxA*	%	100
Extracted ISTD $^{13}C_4$ *PFHpA*	%	97
Extracted ISTD $^{13}C_4$ *PFOA*	%	96
Extracted ISTD $^{13}C_5$ *PFNA*	%	97
Extracted ISTD $^{13}C_2$ *PFDA*	%	101
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	106
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	111
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	145
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	108
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	109
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	122
Extracted ISTD $^{13}C_8$ *FOSA*	%	110
Extracted ISTD d_3 *N MeFOSA*	%	101
Extracted ISTD d_5 *N EtFOSA*	%	94
Extracted ISTD d_7 *N MeFOSE*	%	103
Extracted ISTD d_9 *N EtFOSE*	%	100
Extracted ISTD d_3 *N MeFOSAA*	%	98
Extracted ISTD d_5 *N EtFOSAA*	%	109
Total Positive PFHxS & PFOS	µg/kg	<0.1
Total Positive PFOS & PFOA	µg/kg	1.1
Total Positive PFAS	µg/kg	5.9

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals/elements by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation. Submission of low masses of sample e.g. for dust samples, may result in raised PQLs. Where molecular anion forms are calculated from an element (e.g. SO4 from S or PO4 from P stoichiometrically), the assumption is that the element is only present in that molecular anion form.
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-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. 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-022/025	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.

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			07/08/2025	[NT]	[NT]	[NT]	[NT]	07/08/2025	[NT]
Date analysed	-			08/08/2025	[NT]	[NT]	[NT]	[NT]	08/08/2025	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	100	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	95	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	99	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	99	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	102	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			07/08/2025	[NT]	[NT]	[NT]	[NT]	07/08/2025	[NT]
Date analysed	-			07/08/2025	[NT]	[NT]	[NT]	[NT]	08/08/2025	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate o-Terphenyl	%		Org-020	80	[NT]	[NT]	[NT]	[NT]	89	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			07/08/2025	[NT]	[NT]	[NT]	[NT]	07/08/2025	[NT]
Date analysed	-			08/08/2025	[NT]	[NT]	[NT]	[NT]	08/08/2025	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	128	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	116	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	124	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	120	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	102	[NT]	[NT]	[NT]	[NT]	107	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			07/08/2025	[NT]	[NT]	[NT]	[NT]	07/08/2025	[NT]
Date analysed	-			08/08/2025	[NT]	[NT]	[NT]	[NT]	08/08/2025	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	95	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			07/08/2025	[NT]	[NT]	[NT]	[NT]	07/08/2025	[NT]
Date analysed	-			08/08/2025	[NT]	[NT]	[NT]	[NT]	08/08/2025	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	134	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	128	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	140	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Fenthion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	118	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	130	[NT]
Phosalone	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	95	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			07/08/2025	[NT]	[NT]	[NT]	[NT]	07/08/2025	[NT]
Date analysed	-			08/08/2025	[NT]	[NT]	[NT]	[NT]	08/08/2025	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	116	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	94	[NT]	[NT]	[NT]	[NT]	87	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date prepared	-			07/08/2025	[NT]	[NT]	[NT]	[NT]	07/08/2025	[NT]
Date analysed	-			07/08/2025	[NT]	[NT]	[NT]	[NT]	07/08/2025	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	109	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	103	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date prepared	-			08/08/2025	[NT]	[NT]	[NT]	[NT]	08/08/2025	[NT]
Date analysed	-			08/08/2025	[NT]	[NT]	[NT]	[NT]	08/08/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	88	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	78	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	96	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	99	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	98	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	104	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	92	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	85	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	73	[NT]	[NT]	[NT]	[NT]	88	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	142	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	111	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	116	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	112	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	79	[NT]	[NT]	[NT]	[NT]	81	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	64	[NT]	[NT]	[NT]	[NT]	68	[NT]

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.

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.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

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.

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.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

TRH/BTEX/PAH/OCP/OPP/PCB - Samples were out of the recommended holding time for this analysis.

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SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Vittal Boggaram

Sample Login Details

Your reference	E37757B Rouse Hill Hospital
Envirolab Reference	386894-A
Date Sample Received	25/07/2025
Date Instructions Received	06/08/2025
Date Results Expected to be Reported	13/08/2025

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	4
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Holding time exceedance organics TP504/0-0.1

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoiced accordingly.

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	PFAS in Soils Extended	On Hold
TP501-0-0.1									✓
TP501-0.2-0.3									✓
TP501-0.4-0.5									✓
TP501-0.5-0.6									✓
TP502-0-0.1									✓
TP502-0.2-0.3									✓
TP502-0.5-0.6									✓
TP502-0.9-1.0									✓
TP502-1.2-1.3									✓
TP503-0-0.1									✓
TP503-0.2-0.3	✓	✓	✓				✓		
TP503-0.6-0.7									✓
TP504-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	
TP504-0.2-0.1									✓
TP504-0.6-0.7									✓
TP505-0-0.1									✓
TP505-0.4-0.5									✓
TP505-0.9-1.0									✓
TP505-1.7-1.8									✓
TP506-0-0.1									✓
TP506-0.4-0.5									✓
TP506-1.0-1.1									✓
TP506-1.8-1.9									✓
TP506-1.9-2.0									✓
TP507-0-0.1									✓
TP507-0.3-0.4									✓
TP507-0.5-0.6									✓
TP508-0-0.1									✓
TP508-0.4-0.5									✓
TP509-0-0.1									✓
TP509-0.3-0.4									✓
TP509-0.7-0.8									✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	PFAS in Soils Extended	On Hold
TP510-0-0.1									✓
TP510-0.6-0.7									✓
TP510-1.4-1.5									✓
TP510-1.9-2.0									✓
TP510-2.3-2.4									✓
TP510-2.7-2.8									✓
TP511-0-0.1									✓
TP511-0.1-0.2									✓
TP511-0.3-0.4									✓
TP511-0.5-0.6									✓
TP512-0-0.1									✓
TP512-0.3-0.4									✓
TP512-0.7-0.8									✓
TP513-0-0.1									✓
TP513-0.4-0.5									✓
TP514-0-0.1									✓
TP514-0.2-0.3									✓
TP515-0-0.1									✓
TP515-0.2-0.3									✓
TP515-0.6-0.7									✓
TP516-0-0.1									✓
TP516-0.3-0.4									✓
TP516-0.6-0.7									✓
TP517-0-0.1									✓
TP517-0.3-0.4									✓
TP518-0-0.1									✓
TP518-0.3-0.4									✓
TP519-0-0.1									✓
TP519-0.3-0.4									✓
TP520-0-0.1									✓
TP520-0.3-0.4									✓
TP521-0-0.1									✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	PFAS in Soils Extended	On Hold
TP521-0.4-0.5									✓
TP522-0-0.1									✓
TP522-0.3-0.4									✓
TP522-0.5-0.6									✓
TP523-0-0.1									✓
TP523-0.3-0.4									✓
TP524-0-0.1									✓
TP524-0.3-0.4									✓
TP525-0-0.1									✓
TP525-0.4-0.5									✓
TP526-0-0.1									✓
TP526-0.3-0.4									✓
TP526-0.7-0.8									✓
TP527-0-0.1									✓
TP527-0.2-0.3									✓
TP527-0.7-0.8									✓
TP528-0-0.1									✓
TP528-0.3-0.4									✓
TP529-0-0.1									✓
TP529-0.2-0.3									✓
TP530-0-0.1									✓
TP530-0.3-0.4									✓
TP530-0.7-0.8									✓
TP530-1.2-1.3									✓
TP531-0-0.1									✓
TP531-0.2-0.3									✓
TP531-0.4-0.5									✓
TP531-0.6-0.7									✓
TP532-0-0.1									✓
TP532-0.2-0.3									✓
TP532-0.5-0.6									✓
TP532-0.9-1.0									✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	PFAS in Soils Extended	On Hold
SDUP501									✓
SDUP503									✓
SDUP505									✓
SDUP506									✓
SDUP507									✓
TB-501									✓
TS-501									✓
FR-SHOVEL-501									✓
TB-502									✓
TS-502									✓
FR-SHOVEL-502									✓
TP531 - [TRIPLICATE]-0.2-0.3									✓
TP532 - [TRIPLICATE]-0-0.1									✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Geoff Weir

From: Victoria Reain <VReain@jkenvironments.com.au>
Sent: Wednesday, 6 August 2025 10:25 AM
To: Envirolab Sydney Sample Receipt
Cc: Vittal Boggaram
Subject: JKE Additional Analysis request - Job reference: 386894
Attachments: 386894-COC.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Team,

Could we please request analysis of the following please (Job Reference 386894 / JKE job number E37757B):

- TP503 (0.2-0.3m) (Lab reference: 11) analysing for Combo 3;
- TP504 (0-0.1m) (Lab reference: 13) analysing for Combo 6 and PFAS (extended).

If there are any issues please let us know. Thank you!

Regards
Victoria Reain
Environmental Scientist

T: +61 2 9888 5000
D: +61 491 052 833
E: VReain@jkenvironments.com.au
www.jkenvironments.com.au

PO Box 976
NORTH RYDE BC NSW 1670
115 Wicks Road
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JKEnvironments

This email and any attachments are confidential and may be privileged in which case neither is intended to be waived. If you have received this message in error, please notify us and remove it from your system. It is your responsibility to check any attachments for viruses and defects before opening or sending them on. At the Company's discretion we may send a paper copy for confirmation. In the event of any discrepancy between paper and electronic versions the paper version is to take precedence.

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Certificate of Analysis MGG0474

Client Details

Client	JK Environments
Contact	Vittal Boggaram
Address	115 Wicks Road, Macquarie Park, NSW, 2113

Sample Details

Your Reference	E37757B
Number of Samples	3 Soil
Date Samples Received	29/07/2025
Date Instructions Received	29/07/2025

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 soils and on an as received basis for other matrices.

Report Details

Date Final Results Expected	04/08/2025
Date of Issue	04/08/2025

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Accredited for compliance with ISO/IEC 17025. Tests not covered by NATA are denoted with *.

Authorisation Details

Results Approved By	Chris De Luca, Lab Manager Maggie Hu, Organics Supervisor Tara White, Metals Supervisor
Laboratory Manager	Chris De Luca

Certificate of Analysis MGG0474

Samples in this Report

Envirolab ID	Sample ID	Matrix	Date Sampled	Date Received
MGG0474-01	SDUP502	Soil	23/07/2025	29/07/2025
MGG0474-02	SDUP504	Soil	23/07/2025	29/07/2025
MGG0474-03	SDUP508	Soil	25/07/2025	29/07/2025

Volatile TRH and BTEX (Soil)

Envirolab ID	Units	PQL	MGG0474-01	MGG0474-02	MGG0474-03
Your Reference			SDUP502	SDUP504	SDUP508
Date Sampled			23/07/2025	23/07/2025	25/07/2025
TRH C6-C9	mg/kg	25	<25	<25	<25
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 less BTEX (F1)	mg/kg	25	<25	<25	<25
Methyl tert butyl ether (MTBE)	mg/kg	0.50	<0.50	<0.50	<0.50
Benzene	mg/kg	0.20	<0.20	<0.20	<0.20
Toluene	mg/kg	0.50	<0.50	<0.50	<0.50
Ethylbenzene	mg/kg	1.0	<1.0	<1.0	<1.0
meta+para Xylene	mg/kg	2.0	<2.0	<2.0	<2.0
ortho-Xylene	mg/kg	1.0	<1.0	<1.0	<1.0
Total +ve Xylenes	mg/kg	1.0	<1.0	<1.0	<1.0
Naphthalene (value used in F2 calc)	mg/kg	1.0	<1.0	<1.0	<1.0
Total +ve BTEX	mg/kg	0.20	<0.20	<0.20	<0.20
Surrogate aaa-Trifluorotoluene	%		*83.7*	*83.4*	*84.6*

Semi-volatile TRH (Soil)

Envirolab ID	Units	PQL	MGG0474-01	MGG0474-02	MGG0474-03
Your Reference			SDUP502	SDUP504	SDUP508
Date Sampled			23/07/2025	23/07/2025	25/07/2025
TRH C10-C14	mg/kg	50	<50	<50	<50
TRH C15-C28	mg/kg	100	<100	<100	<100
TRH C29-C36	mg/kg	100	<100	<100	<100
Total +ve TRH C10-C36	mg/kg	50	<50	<50	<50
TRH >C10-C16	mg/kg	50	<50	<50	<50
TRH >C10-C16 less Naphthalene F2	mg/kg	50	<50	<50	<50
TRH >C16-C34 (F3)	mg/kg	100	<100	<100	<100
TRH >C34-C40 (F4)	mg/kg	100	<100	<100	<100
Total +ve TRH >C10-C40	mg/kg	50	<50	<50	<50
Surrogate o-Terphenyl	%		*88.0*	*88.5*	*88.0*

Polycyclic Aromatic Hydrocarbons (Soil)

Envirolab ID	Units	PQL	MGG0474-01	MGG0474-02	MGG0474-03
Your Reference			SDUP502	SDUP504	SDUP508
Date Sampled			23/07/2025	23/07/2025	25/07/2025
Naphthalene	mg/kg	0.10	<0.10	<0.10	<0.10
Acenaphthylene	mg/kg	0.10	<0.10	<0.10	<0.10
Acenaphthene	mg/kg	0.10	<0.10	<0.10	<0.10
Fluorene	mg/kg	0.10	<0.10	<0.10	<0.10
Phenanthrene	mg/kg	0.10	<0.10	<0.10	<0.10
Anthracene	mg/kg	0.10	<0.10	<0.10	<0.10
Fluoranthene	mg/kg	0.10	<0.10	<0.10	<0.10
Pyrene	mg/kg	0.10	<0.10	<0.10	<0.10
Benzo(a)anthracene	mg/kg	0.10	<0.10	<0.10	<0.10
Chrysene	mg/kg	0.10	<0.10	<0.10	<0.10
Benzo(b,j,k)fluoranthene	mg/kg	0.20	<0.20	<0.20	<0.20
Benzo(a)pyrene	mg/kg	0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	mg/kg	0.10	<0.10	<0.10	<0.10
Dibenzo(a,h)anthracene	mg/kg	0.10	<0.10	<0.10	<0.10
Benzo(g,h,i)perylene	mg/kg	0.10	<0.10	<0.10	<0.10
Total +ve PAH	mg/kg	0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene TEQ calc zero	mg/kg	0.50	<0.50	<0.50	<0.50
Benzo(a)pyrene TEQ calc Half	mg/kg	0.50	<0.50	<0.50	<0.50
Benzo(a)pyrene TEQ calc PQL	mg/kg	0.50	<0.50	<0.50	<0.50
Surrogate p-Terphenyl-D14	%		*93.3*	*93.9*	*91.5*

Organochlorine Pesticides (Soil)

Envirolab ID	Units	PQL	MGG0474-01	MGG0474-02
Your Reference			SDUP502	SDUP504
Date Sampled			23/07/2025	23/07/2025
alpha-BHC	mg/kg	0.10	<0.10	<0.10
Hexachlorobenzene	mg/kg	0.10	<0.10	<0.10
beta-BHC	mg/kg	0.10	<0.10	<0.10
gamma-BHC	mg/kg	0.10	<0.10	<0.10
delta-BHC	mg/kg	0.10	<0.10	<0.10
Heptachlor	mg/kg	0.10	<0.10	<0.10
Aldrin	mg/kg	0.10	<0.10	<0.10
Heptachlor epoxide	mg/kg	0.10	<0.10	<0.10
trans-Chlordane	mg/kg	0.10	<0.10	<0.10
cis-Chlordane	mg/kg	0.10	<0.10	<0.10
Endosulfan I	mg/kg	0.10	<0.10	<0.10
4,4'-DDE	mg/kg	0.10	<0.10	<0.10
Dieldrin	mg/kg	0.10	<0.10	<0.10
Endrin	mg/kg	0.10	<0.10	<0.10
4,4'-DDD	mg/kg	0.10	<0.10	<0.10
Endosulfan II	mg/kg	0.10	<0.10	<0.10
Endrin aldehyde	mg/kg	0.10	<0.10	<0.10
4,4'-DDT	mg/kg	0.10	<0.10	<0.10
Endosulfan sulfate	mg/kg	0.10	<0.10	<0.10
Endrin ketone	mg/kg	0.10	<0.10	<0.10
Methoxychlor	mg/kg	0.10	<0.10	<0.10
Mirex	mg/kg	0.10	<0.10	<0.10
Total +ve DDT+DDD+DDE	mg/kg	0.10	<0.10	<0.10
Total +ve Aldrin + Dieldrin	mg/kg	0.10	<0.10	<0.10
Total +ve OCP	mg/kg	0.10	<0.10	<0.10
Surrogate 4-chloro-3-nitrobenzotrifluoride	%		*104*	*108*

Organophosphorus Pesticides (Soil)

Envirolab ID	Units	PQL	MGG0474-01	MGG0474-02
Your Reference			SDUP502	SDUP504
Date Sampled			23/07/2025	23/07/2025
Dichlorvos	mg/kg	0.10	<0.10	<0.10
Dimethoate	mg/kg	0.10	<0.10	<0.10
Diazinon	mg/kg	0.10	<0.10	<0.10
Chlorpyrifos-methyl	mg/kg	0.10	<0.10	<0.10
Ronnel	mg/kg	0.10	<0.10	<0.10
Fenitrothion	mg/kg	0.10	<0.10	<0.10
Malathion	mg/kg	0.10	<0.10	<0.10
Chlorpyrifos	mg/kg	0.10	<0.10	<0.10
Parathion	mg/kg	0.10	<0.10	<0.10
Bromophos-ethyl	mg/kg	0.10	<0.10	<0.10
Ethion	mg/kg	0.10	<0.10	<0.10
Coumaphos	mg/kg	0.10	<0.10	<0.10
Disulfoton	mg/kg	0.10	<0.10	<0.10
Fenamiphos	mg/kg	0.10	<0.10	<0.10
Fenthion	mg/kg	0.10	<0.10	<0.10
Methidathion	mg/kg	0.10	<0.10	<0.10
Mevinphos	mg/kg	0.10	<0.10	<0.10
Parathion-methyl	mg/kg	0.10	<0.10	<0.10
Phorate	mg/kg	0.10	<0.10	<0.10
Phosalone	mg/kg	0.10	<0.10	<0.10
Azinphos-methyl	mg/kg	0.10	<0.10	<0.10
Surrogate 4-chloro-3-nitrobenzotrifluoride	%		*104*	*108*

Polychlorinated Biphenyls (Soil)

Envirolab ID	Units	PQL	MGG0474-01	MGG0474-02
Your Reference			SDUP502	SDUP504
Date Sampled			23/07/2025	23/07/2025
Aroclor 1016	mg/kg	0.10	<0.10	<0.10
Aroclor 1221	mg/kg	0.10	<0.10	<0.10
Aroclor 1232	mg/kg	0.10	<0.10	<0.10
Aroclor 1242	mg/kg	0.10	<0.10	<0.10
Aroclor 1248	mg/kg	0.10	<0.10	<0.10
Aroclor 1254	mg/kg	0.10	<0.10	<0.10
Aroclor 1260	mg/kg	0.10	<0.10	<0.10
Total +ve PCB (1016-1260)	mg/kg	0.10	<0.10	<0.10
Surrogate 2-Fluorobiphenyl	%		*91.9*	*95.7*

Acid Extractable Metals (Soil)

Envirolab ID	Units	PQL	MGG0474-01	MGG0474-02	MGG0474-03
Your Reference			SDUP502	SDUP504	SDUP508
Date Sampled			23/07/2025	23/07/2025	25/07/2025
Arsenic	mg/kg	4.0	7.5	4.6	6.4
Cadmium	mg/kg	0.40	<0.40	<0.40	<0.40
Chromium	mg/kg	1.0	19	16	11
Copper	mg/kg	1.0	28	21	28
Mercury	mg/kg	0.10	<0.10	<0.10	<0.10
Nickel	mg/kg	1.0	13	7.5	17
Lead	mg/kg	1.0	29	30	23
Zinc	mg/kg	1.0	53	41	76

Inorganics - Moisture (Soil)

Envirolab ID	Units	PQL	MGG0474-01	MGG0474-02	MGG0474-03
Your Reference			SDUP502	SDUP504	SDUP508
Date Sampled			23/07/2025	23/07/2025	25/07/2025
Moisture	%	0.10	14	21	12

PFAS Extended List (Soil)

Envirolab ID	Units	PQL	MGG0474-01
Your Reference			SDUP502
Date Sampled			23/07/2025
Perfluorobutanesulfonic acid (PFBS)	µg/kg	0.10	<0.10
Perfluoropentanesulfonic acid (PFPeS)	µg/kg	0.10	<0.10
Perfluorohexanesulfonic acid (PFHxS)	µg/kg	0.10	<0.10
Perfluoroheptanesulfonic acid (PFHpS)	µg/kg	0.10	<0.10
Perfluorooctanesulfonic acid (PFOS)	µg/kg	0.10	<0.10
Perfluorodecanesulfonic acid (PFDS)	µg/kg	0.20	<0.20
Perfluorobutanoic acid (PFBA)	µg/kg	0.20	<0.20
Perfluoropentanoic acid (PFPeA)	µg/kg	0.20	<0.20
Perfluorohexanoic acid (PFHxA)	µg/kg	0.10	<0.10
Perfluoroheptanoic acid (PFHpA)	µg/kg	0.10	<0.10
Perfluorooctanoic acid (PFOA)	µg/kg	0.10	0.22
Perfluorononanoic acid (PFNA)	µg/kg	0.10	<0.10
Perfluorodecanoic acid (PFDA)	µg/kg	0.50	0.66
Perfluoroundecanoic acid (PFUnDA)	µg/kg	0.50	<0.50
Perfluorododecanoic acid (PFDoDA)	µg/kg	0.50	<0.50
Perfluorotridecanoic acid (PFTrDA)	µg/kg	0.50	<0.50
Perfluorotetradecanoic acid (PFTeDA)	µg/kg	5.0	<5.0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/kg	0.10	<0.10
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/kg	0.10	<0.10
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/kg	0.20	<0.20
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/kg	0.20	<0.20
Perfluorooctane sulfonamide (FOSA)	µg/kg	1.0	<1.0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/kg	1.0	<1.0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/kg	1.0	<1.0
N-Methyl perfluorooctane sulfonamidoethanol	µg/kg	1.0	<1.0
N-Ethyl perfluorooctane sulfonamidoethanol	µg/kg	5.0	<5.0
N-Methyl perfluorooctane sulfonamidoacetic acid	µg/kg	0.20	<0.20
N-Ethyl perfluorooctane sulfonamidoacetic acid	µg/kg	0.20	<0.20
Surrogate 13C8 PFOS	%		*93.5*
Surrogate 13C2 PFOA	%		*97.8*
Total +ve PFHxS+PFOS	µg/kg	0.10	<0.10
Total +ve PFOA+PFOS	µg/kg	0.10	0.22
Total +ve PFAS	µg/kg	0.10	0.88
Extraction Internal Standard 13C3 PFBS	%		*87.8*
Extraction Internal Standard 18O2 PFHxS	%		*87.3*
Extraction Internal Standard 13C4 PFOS	%		*80.4*
Extraction Internal Standard 13C4 PFBA	%		*85.7*
Extraction Internal Standard 13C3 PFPeA	%		*87.7*
Extraction Internal Standard 13C2 PFHxA	%		*97.5*
Extraction Internal Standard 13C4 PFHpA	%		*96.6*
Extraction Internal Standard 13C4 PFOA	%		*89.6*
Extraction Internal Standard 13C5 PFNA	%		*82.9*
Extraction Internal Standard 13C2 PFDA	%		*79.6*

PFAS Extended List (Soil)

Envirolab ID	Units	PQL	MGG0474-01
Your Reference			SDUP502
Date Sampled			23/07/2025
Extraction Internal Standard 13C2 PFUnDA	%		*86.0*
Extraction Internal Standard 13C2 PFDoDA	%		*80.7*
Extraction Internal Standard 13C2 PFTeDA	%		*113*
Extraction Internal Standard 13C2 4:2FTS	%		*88.2*
Extraction Internal Standard 13C2 6:2FTS	%		*88.3*
Extraction Internal Standard 13C2 8:2FTS	%		*78.3*
Extraction Internal Standard 13C8 FOSA	%		*88.4*
Extraction Internal Standard d3 N MeFOSA	%		*85.4*
Extraction Internal Standard d5 N EtFOSA	%		*88.7*
Extraction Internal Standard d7 N MeFOSE	%		*87.2*
Extraction Internal Standard d9 N EtFOSE	%		*91.1*
Extraction Internal Standard d3 N MeFOSAA	%		*89.3*
Extraction Internal Standard d5 N EtFOSAA	%		*74.6*

Method Summary

Method ID	Methodology Summary
INORG-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
METALS-020	Determination of various metals by ICP-OES. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
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. 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-021/022/025_PCB	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS.
ORG-022	Determination of semi-volatile organic compounds (SVOCs) by GC-MS. Water samples are extracted by LLE and soils using DCM/Acetone/Methanol.
ORG-022_OC	Determination of semi-volatile organic compounds (SVOCs) by GC-MS. Water samples are extracted by LLE and soils using DCM/Acetone/Methanol.
ORG-022_PAH	Determination of semi-volatile organic compounds (SVOCs) by GC-MS. Water samples are extracted by LLE and solids using DCM/Acetone/Methanol. For PAHs:- Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. 1. 'TEQ 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. 'TEQ 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. 'TEQ 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, for Total +ve calculations, the PQL is reflective of the lowest individual PQL and therefore, for example, "Total +ve PAHs" is simply a sum of the positive individual PAHs.
ORG-023_F1_TOT	Determination of volatile organic compounds (VOCs) by P&T-GC-MS. Water samples are analysed directly by purge and trap GC-MS. Solids are extracted with Methanol, diluted and analysed 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 therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
ORG-029	Soil/solid and sorbent samples are extracted with basified Methanol. Waters and soil/sorbent extracts are directly injected and/or concentrated/extracted using SPE. TCLP/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MSMS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

Result Definitions

Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

Quality Control Definitions

Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

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.

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.

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.

Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

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.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

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 QAQC tables for details (available on request); <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; 60-140% for organics (+/-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 typically insufficient in order to satisfy laboratory QA/QC protocols.

Miscellaneous Information

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. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

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 or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volume(s) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Data Quality Assessment Summary MGG0474

Client Details

Client	JK Environments
Your Reference	E37757B
Date Issued	04/08/2025

Recommended Holding Time Compliance

No recommended holding time exceedances

Quality Control and QC Frequency

QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	No	Duplicate Outliers Exist - See detailed list below
Matrix Spike	No	Matrix Spike Outliers Exist - See detailed list below
Surrogates / Extracted Internal Standards	Yes	No Outliers
QC Frequency	Yes	No Outliers

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

Data Quality Assessment Summary MGG0474

Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
vTRH&MBTEXN | Soil	2	23/07/2025	31/07/2025	01/08/2025	Yes
	1	23/07/2025	31/07/2025	31/07/2025	Yes
	3	25/07/2025	31/07/2025	01/08/2025	Yes
sTRH | Soil	1-2	23/07/2025	31/07/2025	31/07/2025	Yes
	3	25/07/2025	31/07/2025	31/07/2025	Yes
PAH | Soil	1-2	23/07/2025	31/07/2025	31/07/2025	Yes
	3	25/07/2025	31/07/2025	31/07/2025	Yes
OCP | Soil	1-2	23/07/2025	31/07/2025	31/07/2025	Yes
OPP (21 list) | Soil	1-2	23/07/2025	31/07/2025	31/07/2025	Yes
PCB | Soil	1-2	23/07/2025	31/07/2025	31/07/2025	Yes
Metals | Soil	1-2	23/07/2025	31/07/2025	31/07/2025	Yes
	3	25/07/2025	31/07/2025	31/07/2025	Yes
Metals-Hg | Soil	1-2	23/07/2025	31/07/2025	31/07/2025	Yes
	3	25/07/2025	31/07/2025	31/07/2025	Yes
Moisture | Soil	1-2	23/07/2025	31/07/2025	01/08/2025	Yes
	3	25/07/2025	31/07/2025	01/08/2025	Yes
PFAS EXT-ISTD | Soil	1	23/07/2025	31/07/2025	01/08/2025	Yes
PFAS-Extended | Soil	1	23/07/2025	31/07/2025	01/08/2025	Yes

Outliers: Duplicates

ORG-022_PAH|Polycyclic Aromatic Hydrocarbons (Soil)| Batch BGG4475

Sample ID	Duplicate ID	Analyte	% Limits	RPD
BGG4475-DUP1#	DUP1	Benzo(a)pyrene	50.00	55.5[2]

Outliers: Matrix Spike

ORG-022|Organophosphorus Pesticides (Soil)| Batch BGG4475

Sample ID	Analyte	% Limits	% Recovery
MGG0474-01	Parathion	60 - 140	##[1]

Quality Control MGG0474

ORG-023_F1_TOT|Volatile TRH and BTEX (Soil) | Batch BGG4474

Analyte	Units	PQL	Blank	DUP1 BGG4474-DUP1# Samp | QC | RPD %	DUP2 BGG4474-DUP2# Samp | QC | RPD %	LCS %	Spike % MGG0474-01
TRH C6-C9	mg/kg	25	<25	<25 | <25 | [NA]	<25 | <25 | [NA]	99.0	92.2
TRH C6-C10	mg/kg	25	<25	<25 | <25 | [NA]	<25 | <25 | [NA]	97.4	92.8
Methyl tert butyl ether (MTBE)	mg/kg	0.50	<0.50	<0.50 | <0.50 | [NA]	<0.50 | <0.50 | [NA]	[NA]	[NA]
Benzene	mg/kg	0.20	<0.20	<0.20 | <0.20 | [NA]	<0.20 | <0.20 | [NA]	88.2	83.5
Toluene	mg/kg	0.50	<0.50	<0.50 | <0.50 | [NA]	<0.50 | <0.50 | [NA]	92.5	87.2
Ethylbenzene	mg/kg	1.0	<1.0	<1.0 | <1.0 | [NA]	<1.0 | <1.0 | [NA]	93.9	88.6
meta+para Xylene	mg/kg	2.0	<2.0	<2.0 | <2.0 | [NA]	<2.0 | <2.0 | [NA]	96.7	91.7
ortho-Xylene	mg/kg	1.0	<1.0	<1.0 | <1.0 | [NA]	<1.0 | <1.0 | [NA]	96.0	90.7
Naphthalene (value used in F2 calc)	mg/kg	1.0	<1.0	<1.0 | <1.0 | [NA]	<1.0 | <1.0 | [NA]	[NA]	[NA]
Surrogate aaa-Trifluorotoluene	*%*		*90.1*	*80.3 | 83.6*	*82.4 | 82.7*	*89.6*	*87.9*

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

ORG-020|Semi-volatile TRH (Soil) | Batch BGG4475

Analyte	Units	PQL	Blank	DUP1 BGG4475-DUP1# Samp | QC | RPD %	DUP2 BGG4475-DUP2# Samp | QC | RPD %	LCS %	Spike % MGG0474-01
TRH C10-C14	mg/kg	50	<50	<50 | <50 | [NA]	<50 | <50 | [NA]	130	120
TRH C15-C28	mg/kg	100	<100	<100 | <100 | [NA]	<100 | <100 | [NA]	112	106
TRH C29-C36	mg/kg	100	<100	<100 | <100 | [NA]	<100 | <100 | [NA]	115	88.5
TRH >C10-C16	mg/kg	50	<50	<50 | <50 | [NA]	<50 | <50 | [NA]	104	97.4
TRH >C16-C34 (F3)	mg/kg	100	<100	<100 | <100 | [NA]	<100 | <100 | [NA]	116	108
TRH >C34-C40 (F4)	mg/kg	100	<100	<100 | <100 | [NA]	<100 | <100 | [NA]	104	86.0
Surrogate o-Terphenyl	*%*		*93.8*	*94.1 | 92.6*	*87.6 | 89.0*	*104*	*100*

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

ORG-022_PAH|Polycyclic Aromatic Hydrocarbons (Soil) | Batch BGG4475

Analyte	Units	PQL	Blank	DUP1 BGG4475-DUP1# Samp | QC | RPD %	DUP2 BGG4475-DUP2# Samp | QC | RPD %	LCS %	Spike % MGG0474-01
Naphthalene	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	113	118
Acenaphthylene	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Acenaphthene	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	115	122
Fluorene	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	112	120
Phenanthrene	mg/kg	0.10	<0.10	0.131 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	112	119
Anthracene	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Fluoranthene	mg/kg	0.10	<0.10	0.512 | 0.300 | [NA]	<0.10 | <0.10 | [NA]	113	120
Pyrene	mg/kg	0.10	<0.10	0.576 | 0.325 | [NA] [2]	<0.10 | <0.10 | [NA]	117	124
Benzo(a)anthracene	mg/kg	0.10	<0.10	0.314 | 0.156 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Chrysene	mg/kg	0.10	<0.10	0.345 | 0.177 | [NA]	<0.10 | <0.10 | [NA]	118	126
Benzo(b,j,k)fluoranthene	mg/kg	0.20	<0.20	0.592 | 0.349 | [NA]	<0.20 | <0.20 | [NA]	[NA]	[NA]
Benzo(a)pyrene	mg/kg	0.050	<0.050	0.375 | 0.212 | 55.5 [2]	<0.050 | 0.0628 | [NA]	107	114
Indeno(1,2,3-c,d)pyrene	mg/kg	0.10	<0.10	0.236 | 0.152 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Dibenzo(a,h)anthracene	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Benzo(g,h,i)perylene	mg/kg	0.10	<0.10	0.233 | 0.160 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Surrogate p-Terphenyl-D14	*%*		*94.2*	*96.4 | 95.6*	*87.7 | 90.8*	*87.3*	*95.9*

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

Quality Control MGG0474

ORG-022_OC|Organochlorine Pesticides (Soil) | Batch BGG4475

Analyte	Units	PQL	Blank	DUP1 BGG4475-DUP1# Samp | QC | RPD %	DUP2 BGG4475-DUP2# Samp | QC | RPD %	LCS %	Spike % MGG0474-01
alpha-BHC	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	108	114
Hexachlorobenzene	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
beta-BHC	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	110	116
gamma-BHC	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
delta-BHC	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Heptachlor	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	126	135
Aldrin	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	126	135
Heptachlor epoxide	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	93.5	102
trans-Chlordane	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
cis-Chlordane	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Endosulfan I	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
4,4'-DDE	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	94.5	104
Dieldrin	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	103	111
Endrin	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	121	131
4,4'-DDD	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	115	134
Endosulfan II	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Endrin aldehyde	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
4,4'-DDT	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Endosulfan sulfate	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	88.0	96.0
Endrin ketone	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Methoxychlor	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Mirex	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Surrogate 4-chloro-3-nitrobenzotrifluoride	*%*		*102*	*108 | 107*	*99.4 | 102*	*103*	*113*

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

ORG-022|Organophosphorus Pesticides (Soil) | Batch BGG4475

Analyte	Units	PQL	Blank	DUP1 BGG4475-DUP1# Samp | QC | RPD %	DUP2 BGG4475-DUP2# Samp | QC | RPD %	LCS %	Spike % MGG0474-01
Dichlorvos	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	94.3	108
Dimethoate	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Diazinon	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Chlorpyrifos-methyl	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	92.0	100
Ronnel	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	96.1	105
Fenitrothion	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	125	129
Malathion	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	93.1	133
Chlorpyrifos	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	85.8	94.5
Parathion	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	125	##[1]
Bromophos-ethyl	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Ethion	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	92.9	101
Coumaphos	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Disulfoton	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Fenamiphos	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Fenthion	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Methidathion	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Mevinphos	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Parathion-methyl	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Phorate	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Phosalone	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Azinphos-methyl	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Surrogate 4-chloro-3-nitrobenzotrifluoride	*%*		*102*	*108 | 107*	*99.4 | 102*	*103*	*113*

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

Quality Control MGG0474

ORG-021/022/025_PCB|Polychlorinated Biphenyls (Soil) | Batch BGG4475

Analyte	Units	PQL	Blank	DUP1 BGG4475-DUP1# Samp | QC | RPD %	DUP2 BGG4475-DUP2# Samp | QC | RPD %	LCS %	Spike % MGG0474-01
Aroclor 1016	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Aroclor 1221	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Aroclor 1232	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Aroclor 1242	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Aroclor 1248	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Aroclor 1254	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
Aroclor 1260	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	<0.10 | <0.10 | [NA]	[NA]	[NA]
PCB C103	mg/kg			0.00 | 0.00 | [NA]	0.00 | 0.00 | [NA]	96.1	105
Surrogate 2-Fluorobiphenyl	*%*		*86.6*	*94.2 | 92.6*	*86.2 | 89.1*	*90.3*	*97.5*

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

METALS-020|Acid Extractable Metals (Soil) | Batch BGG4473

Analyte	Units	PQL	Blank	DUP1 BGG4473-DUP1# Samp | QC | RPD %	DUP2 BGG4473-DUP2# Samp | QC | RPD %	LCS %	Spike % MGG0474-01
Arsenic	mg/kg	4.0	<4.0	<4.0 | <4.0 | [NA]		104	99.0
Cadmium	mg/kg	0.40	<0.40	<0.40 | <0.40 | [NA]		108	91.5
Chromium	mg/kg	1.0	<1.0	6.87 | 9.47 | 31.8		104	96.8
Copper	mg/kg	1.0	<1.0	50.4 | 61.9 | 20.6		110	103
Lead	mg/kg	1.0	<1.0	124 | 163 | 27.2		100	79.8
Mercury	mg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]		112	107
Nickel	mg/kg	1.0	<1.0	4.07 | 4.72 | [NA]		104	88.3
Zinc	mg/kg	1.0	<1.0	94.0 | 125 | 28.7		105	75.5

Analyte	Units	PQL	Blank	DUP3 BGG4473-DUP3# Samp | QC | RPD %	DUP4 BGG4473-DUP4# Samp | QC | RPD %	LCS %
Arsenic	mg/kg	4		<4.0 | <4.0 | [NA]		[NA]
Cadmium	mg/kg	0.4		3.29 | 4.56 | 32.4		[NA]
Chromium	mg/kg	1		36.7 | 30.2 | 19.5		[NA]
Copper	mg/kg	1		17.9 | 18.4 | 2.94		[NA]
Lead	mg/kg	1		89.2 | 102 | 12.9		[NA]
Mercury	mg/kg	0.1		<0.10 | 0.101 | [NA]		[NA]
Nickel	mg/kg	1		5.21 | 4.48 | [NA]		[NA]
Zinc	mg/kg	1		123 | 115 | 6.05		[NA]

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

INORG-008|Inorganics - Moisture (Soil) | Batch BGG4472

Analyte	Units	PQL	Blank	DUP1 BGG4472-DUP1# Samp | QC | RPD %	DUP2 BGG4472-DUP2# Samp | QC | RPD %	LCS %
Moisture	%	0.1		12.7 | 13.8 | 8.75	22.1 | 22.6 | 2.24	[NA]

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

Quality Control MGG0474

ORG-029|PFAS Extended List (Soil) | Batch BGG4549

Analyte	Units	PQL	Blank	DUP1 BGG4549-DUP1# Samp | QC | RPD %	LCS %	Spike % BGG4549-MS1#
Perfluorobutanesulfonic acid (PFBS)	µg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	101	104
Perfluoropentanesulfonic acid (PFPeS)	µg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	99.2	94.6
Perfluorohexanesulfonic acid (PFHxS)	µg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	100	102
Perfluoroheptanesulfonic acid (PFHpS)	µg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	109	108
Perfluorooctanesulfonic acid (PFOS)	µg/kg	0.10	<0.10	0.109 | <0.10 | [NA]	96.1	103
Perfluorodecanesulfonic acid (PFDS)	µg/kg	0.20	<0.20	<0.20 | <0.20 | [NA]	115	108
Perfluorobutanoic acid (PFBA)	µg/kg	0.20	<0.20	<0.20 | <0.20 | [NA]	104	103
Perfluoropentanoic acid (PFPeA)	µg/kg	0.20	<0.20	<0.20 | <0.20 | [NA]	101	102
Perfluorohexanoic acid (PFHxA)	µg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	106	110
Perfluoroheptanoic acid (PFHpA)	µg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	101	102
Perfluorooctanoic acid (PFOA)	µg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	102	110
Perfluorononanoic acid (PFNA)	µg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	104	105
Perfluorodecanoic acid (PFDA)	µg/kg	0.50	<0.50	<0.50 | <0.50 | [NA]	105	104
Perfluoroundecanoic acid (PFUnDA)	µg/kg	0.50	<0.50	<0.50 | <0.50 | [NA]	105	111
Perfluorododecanoic acid (PFDoDA)	µg/kg	0.50	<0.50	<0.50 | <0.50 | [NA]	104	107
Perfluorotridecanoic acid (PFTrDA)	µg/kg	0.50	<0.50	<0.50 | <0.50 | [NA]	108	118
Perfluorotetradecanoic acid (PFTeDA)	µg/kg	5.0	<5.0	<5.0 | <5.0 | [NA]	111	115
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	105	108
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/kg	0.10	<0.10	<0.10 | <0.10 | [NA]	102	106
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/kg	0.20	<0.20	<0.20 | <0.20 | [NA]	107	107
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/kg	0.20	<0.20	<0.20 | <0.20 | [NA]	107	106
Perfluorooctane sulfonamide (FOSA)	µg/kg	1.0	<1.0	<1.0 | <1.0 | [NA]	100	104
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/kg	1.0	<1.0	<1.0 | <1.0 | [NA]	106	108
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/kg	1.0	<1.0	<1.0 | <1.0 | [NA]	95.3	99.5
N-Methyl perfluorooctane sulfonamidoethanol	µg/kg	1.0	<1.0	<1.0 | <1.0 | [NA]	100	93.1
N-Ethyl perfluorooctane sulfonamidoethanol	µg/kg	5.0	<5.0	<5.0 | <5.0 | [NA]	101	105
N-Methyl perfluorooctane sulfonamidoacetic acid	µg/kg	0.20	<0.20	<0.20 | <0.20 | [NA]	103	103
N-Ethyl perfluorooctane sulfonamidoacetic acid	µg/kg	0.20	<0.20	<0.20 | <0.20 | [NA]	96.9	100
Surrogate 13C8 PFOS	%		*100*	*96.4 | 98.9*	*97.3*	*100*
Surrogate 13C2 PFOA	%		*96.2*	*97.0 | 95.5*	*97.2*	*97.5*
Extraction Internal Standard 13C3 PFBS	%		*84.0*	*77.7 | 78.9 | 1.53*	[NA]	[NA]
Extraction Internal Standard 18O2 PFHxS	%		*86.3*	*80.2 | 81.1 | 1.13*	[NA]	[NA]
Extraction Internal Standard 13C4 PFOS	%		*85.3*	*80.7 | 80.4 | 0.397*	[NA]	[NA]
Extraction Internal Standard 13C4 PFBA	%		*88.7*	*81.1 | 80.3 | 0.991*	[NA]	[NA]
Extraction Internal Standard 13C3 PFPeA	%		*89.9*	*81.1 | 81.9 | 0.981*	[NA]	[NA]
Extraction Internal Standard 13C2 PFHxA	%		*90.0*	*81.5 | 84.4 | 3.42*	[NA]	[NA]
Extraction Internal Standard 13C4 PFHpA	%		*93.6*	*85.4 | 83.7 | 1.95*	[NA]	[NA]
Extraction Internal Standard 13C4 PFOA	%		*91.8*	*84.8 | 86.4 | 1.97*	[NA]	[NA]
Extraction Internal Standard 13C5 PFNA	%		*90.5*	*83.2 | 85.2 | 2.35*	[NA]	[NA]
Extraction Internal Standard 13C2 PFDA	%		*81.0*	*73.9 | 75.8 | 2.63*	[NA]	[NA]
Extraction Internal Standard 13C2 PFUnDA	%		*102*	*88.3 | 89.4 | 1.22*	[NA]	[NA]
Extraction Internal Standard 13C2 PFDoDA	%		*91.0*	*81.3 | 83.2 | 2.27*	[NA]	[NA]
Extraction Internal Standard 13C2 PFTeDA	%		*108*	*96.5 | 94.4 | 2.15*	[NA]	[NA]
Extraction Internal Standard 13C2 4:2FTS	%		*91.0*	*78.2 | 90.0 | 14.1*	[NA]	[NA]
Extraction Internal Standard 13C2 6:2FTS	%		*84.9*	*81.8 | 77.2 | 5.74*	[NA]	[NA]
Extraction Internal Standard 13C2 8:2FTS	%		*79.6*	*71.0 | 73.8 | 3.95*	[NA]	[NA]
Extraction Internal Standard 13C8 FOSA	%		*98.9*	*91.0 | 93.3 | 2.42*	[NA]	[NA]
Extraction Internal Standard d3 N MeFOSA	%		*88.4*	*80.3 | 80.7 | 0.398*	[NA]	[NA]
Extraction Internal Standard d5 N EtFOSA	%		*95.1*	*84.0 | 88.2 | 4.88*	[NA]	[NA]
Extraction Internal Standard d7 N MeFOSE	%		*87.2*	*84.3 | 86.1 | 2.16*	[NA]	[NA]
Extraction Internal Standard d9 N EtFOSE	%		*89.4*	*82.2 | 81.8 | 0.585*	[NA]	[NA]
Extraction Internal Standard d3 N MeFOSAA	%		*84.4*	*77.2 | 73.9 | 4.37*	[NA]	[NA]
Extraction Internal Standard d5 N EtFOSAA	%		*77.4*	*69.3 | 67.0 | 3.36*	[NA]	[NA]

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

Quality Control MGG0474

QC Comments

Identifier	Description
[1]	Spike recovery is outside routine acceptance criteria (60-140%), this may be due to suspected non-homogeneity and/or matrix interference effects. However, an acceptable recovery was achieved for the LCS.
[2]	The laboratory duplicate RPD is outside routine acceptance criteria, this may be due to suspected sample non-homogeneity.

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Sample Receipt Advice MGG0474

Client Details

Client	JK Environments
Attention	Vittal Boggaram

Sample Login Details

Your Reference	E37757B
Envirolab Reference	MGG0474
Date Sample Received	29/07/2025
Date Instructions Received	29/07/2025
Date Final Results Expected	04/08/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
Number of Samples	3 Soil
Turnaround Time	4 Days
Temperatures / Cooling Methods	11.3°C Ice Pack

Additional Info

Sample storage - waters are routinely disposed at approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Where no sampling date has been supplied for some or all samples, the date of sample receipt has been used as the associated sampling date. The sampling dates are used to assess compliance to recommended Technical Holding Times.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default).

Please direct any queries to:

Chris De Luca

Phone 03 9763 2500
Email cdeluca@envirolab.com.au

Tianna Milburn

Phone 03 9763 2500
Email tmilburn@envirolab.com.au

Analysis underway, details on the following page

Sample Receipt Advice MGG0474

Analysis Grid

The • indicates the testing you have requested. ***THIS IS NOT A REPORT OF THE RESULTS.***

	Combination 3	Combination 6	Moisture
MGG0474-01 Soil | 23/07/2025 SDUP502		•	•
MGG0474-02 Soil | 23/07/2025 SDUP504		•	•
MGG0474-03 Soil | 25/07/2025 SDUP508	•		•

Suite Details

Suite Name	Suite Analyses
Combination 3 |Soil	vTRH&MBTEXN, sTRH, PAH, As, Cd, Cr, Cu, Hg, Ni, Pb, Zn
Combination 6 |Soil	vTRH&MBTEXN, sTRH, PAH, OCP, OPP (21 list), PCB, As, Cd, Cr, Cu, Hg, Ni, Pb, Zn

SAMPLE AND CHAIN OF CUSTODY FORM

TO:
ENVIROLAB SERVICES PTY LTD
12 ASHLEY STREET
CHATSWOOD NSW 2067
P: (02) 99106200
F: (02) 99106201

Attention: Aileen

JKE Job Number: **E37757B**

Date Results Required: **STANDARD**

Page: **4 of 5**

FROM:
JKEnvironments
REAR OF 115 WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 5000 F: 02-9888 5001
Attention: **Vittal Boggaram**
vboggaram@jkenvironments.com.au

Location: **Rouse Hill Hospital (Main Hospital Site)**
Sampler: **VR**

Sample Preserved in Esky on Ice
Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 6	Combo 6a	Combo 3	Asbestos (detection)	BTEX	PFAS (extended)	PFAS (short)				
24/07/2025	76	TP526	0.3-0.4	G, A	0	Silty Clay												
24/07/2025	77	TP526	0.7-0.8	G, A	0	XW Siltstone												
24/07/2025	78	TP527	0-0.1	G, A	0.1	F: Silty Clay	X											
24/07/2025	79	TP527	0.2-0.3	G, A	0	F: Silty Clay												
24/07/2025	80	TP527	0.7-0.8	G, A	0	Silty Clay												
24/07/2025	81	TP528	0-0.1	G, A	0	F: Silty Clay	X											
24/07/2025	82	TP528	0.3-0.4	G, A	0	Silty Clay												
24/07/2025	83	TP529	0-0.1	G, A	0	F: Silty Clay	X											
24/07/2025	84	TP529	0.2-0.3	G, A	0	Silty Clay												
24/07/2025	85	TP530	0-0.1	G, A	0	F: Silty Clay	X											
24/07/2025	86	TP530	0.3-0.4	G, A	0	F: Silty Clay				X								
24/07/2025	87	TP530	0.7-0.8	G, A	0	F: Silty Clay												
24/07/2025	88	TP530	1.2-1.3	G, A	0	Silty Clay												
24/07/2025	89	TP531	0-0.1	G, A	0	F: Silty Clayey Sand	X											
24/07/2025	90	TP531	0.2-0.3	G, A	0.1	F: Silty Clayey Sand				X								
24/07/2025	91	TP531	0.4-0.5	G, A	0	F: Silty Clay												
24/07/2025	92	TP531	0.6-0.7	G, A	0	XW Siltstone												
24/07/2025	93	TP532	0-0.1	G, A	0	F: Silty Clayey Gravel	X											
24/07/2025	94	TP532	0.2-0.3	G, A	0	F: Silty Clayey Gravel				X								
24/07/2025	95	TP532	0.5-0.6	G, A	0	F: Silty Clay												
24/07/2025	96	TP532	0.9-1.0	G, A	0	Silty Clay												
22/07/2025	97	SDUP501	-	G, Pfas	-	Duplicate		X					X					
1 23/07/2025	510	SDUP502	-	G, Pfas	-	Duplicate		X					X	PLEASE SEND TO VIC				
23/07/2025	98	SDUP503	-	G	-	Duplicate		X										
2 23/07/2025	99	SDUP504	-	G	-	Duplicate		X						PLEASE SEND TO VIC				

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By: VB	Date: 25/07/25	Time: 14:00	Received By:	Date:
EL ND, O.WILCIAK	28/7/25			

386894
25/7/25
CW

ENVIROLAB
Envirolab Services
25 Research Drive
Croydon South VIC 3136
Ph: (03) 9763 2500

Job No: MGG0474

Date Received: 29/07/25
Time Received: 2:05
Received By: JJ
Temp: Cool/Ambient 11.3°C
Cooling: Ice/Icepack
Security: Intact/Broken/None

SAMPLE AND CHAIN OF CUSTODY FORM

TO:
ENVIROLAB SERVICES PTY LTD
12 ASHLEY STREET
CHATSWOOD NSW 2067
P: (02) 99106200
F: (02) 99106201

Attention: Aileen

JKE Job Number: E37757B

Date Results Required: STANDARD

Page: 5 of 5

FROM:
JKEnvironments
REAR OF 115 WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 5000 F: 02-9888 5001
Attention: Vittal Boggaram
vboggaram@jkenvironments.com.au

Location: Rouse Hill Hospital (Main Hospital Site)
Sampler: VR

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 6	Combo 6a	Combo 3	Asbestos (detection)	BTEX	PFAS (short)					
24/07/2025	99	SDUP505	-	G	-	Duplicate												
24/07/2025	100	SDUP506	-	G	-	Duplicate												
25/07/2025	101	SDUP507	-	G	-	Duplicate				X								
25/07/2025	102	SDUP508	-	G	-	Duplicate				X	PLEASE SEND TO VIC							
22/07/2025	102	TB-501	-	V, Pfas	-	Trip Blank		X					X					
22/07/2025	103	TS-501	-	V	-	Trip Spike						X						
23/07/2025	104	FR-SHOVEL-501	-	#3, Pfas	-	Rinsate				X			X					
24/07/2025	105	TB-502	-	V, Pfas	-	Trip Blank		X					X					
24/07/2025	106	TS-502	-	V	-	Trip Spike						X						
25/07/2025	107	FR-SHOVEL-502	-	#3, Pfas	-	Rinsate				X			X					

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By: VB	Date: 25/07/25	Time: 14:00	Received By:	Date:
ELS SYD, O.WILCOX	28/7/25			

386894
25/7/25

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 386894-B

Client Details

Client	JK Environments
Attention	Vittal Boggaram
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E37757B Rouse Hill Hospital**
Number of Samples	Additional analysis
Date samples received	25/07/2025
Date completed instructions received	14/08/2025

Analysis Details

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

Samples were analysed as received from the client unless as indicated below in the method summaries. 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	21/08/2025
Date of Issue	21/08/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

PCBs in Soil		
Our Reference		386894-B-65
Your Reference	UNITS	TP521
Depth		0.4-0.5
Date Sampled		23/07/2025
Type of sample		Soil
Date extracted	-	15/08/2025
Date analysed	-	16/08/2025
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-Fluorobiphenyl	%	99

Moisture		
Our Reference		386894-B-65
Your Reference	UNITS	TP521
Depth		0.4-0.5
Date Sampled		23/07/2025
Type of sample		Soil
Date prepared	-	15/08/2025
Date analysed	-	18/08/2025
Moisture	%	17

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. 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.

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	[NT]
Date extracted	-			15/08/2025	[NT]	[NT]	[NT]	[NT]	15/08/2025	[NT]
Date analysed	-			16/08/2025	[NT]	[NT]	[NT]	[NT]	16/08/2025	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	124	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	99	[NT]	[NT]	[NT]	[NT]	100	[NT]

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.

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.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

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.

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.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

Samples received in good order: Holding time exceedance

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

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Vittal Boggaram

Sample Login Details

Your reference	E37757B Rouse Hill Hospital
Envirolab Reference	386894-B
Date Sample Received	25/07/2025
Date Instructions Received	14/08/2025
Date Results Expected to be Reported	21/08/2025

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	4
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoiced accordingly.

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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

Sample ID	PCBs in Soil	On Hold
TP501-0-0.1		✓
TP501-0.2-0.3		✓
TP501-0.4-0.5		✓
TP501-0.5-0.6		✓
TP502-0-0.1		✓
TP502-0.2-0.3		✓
TP502-0.5-0.6		✓
TP502-0.9-1.0		✓
TP502-1.2-1.3		✓
TP503-0-0.1		✓
TP503-0.2-0.3		✓
TP503-0.6-0.7		✓
TP504-0-0.1		✓
TP504-0.2-0.1		✓
TP504-0.6-0.7		✓
TP505-0-0.1		✓
TP505-0.4-0.5		✓
TP505-0.9-1.0		✓
TP505-1.7-1.8		✓
TP506-0-0.1		✓
TP506-0.4-0.5		✓
TP506-1.0-1.1		✓
TP506-1.8-1.9		✓
TP506-1.9-2.0		✓
TP507-0-0.1		✓
TP507-0.3-0.4		✓
TP507-0.5-0.6		✓
TP508-0-0.1		✓
TP508-0.4-0.5		✓
TP509-0-0.1		✓
TP509-0.3-0.4		✓
TP509-0.7-0.8		✓

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12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	PCBs in Soil	On Hold
TP510-0-0.1		✓
TP510-0.6-0.7		✓
TP510-1.4-1.5		✓
TP510-1.9-2.0		✓
TP510-2.3-2.4		✓
TP510-2.7-2.8		✓
TP511-0-0.1		✓
TP511-0.1-0.2		✓
TP511-0.3-0.4		✓
TP511-0.5-0.6		✓
TP512-0-0.1		✓
TP512-0.3-0.4		✓
TP512-0.7-0.8		✓
TP513-0-0.1		✓
TP513-0.4-0.5		✓
TP514-0-0.1		✓
TP514-0.2-0.3		✓
TP515-0-0.1		✓
TP515-0.2-0.3		✓
TP515-0.6-0.7		✓
TP516-0-0.1		✓
TP516-0.3-0.4		✓
TP516-0.6-0.7		✓
TP517-0-0.1		✓
TP517-0.3-0.4		✓
TP518-0-0.1		✓
TP518-0.3-0.4		✓
TP519-0-0.1		✓
TP519-0.3-0.4		✓
TP520-0-0.1		✓
TP520-0.3-0.4		✓
TP521-0-0.1		✓

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

Sample ID	PCBs in Soil	On Hold
TP521-0.4-0.5	✓	
TP522-0-0.1		✓
TP522-0.3-0.4		✓
TP522-0.5-0.6		✓
TP523-0-0.1		✓
TP523-0.3-0.4		✓
TP524-0-0.1		✓
TP524-0.3-0.4		✓
TP525-0-0.1		✓
TP525-0.4-0.5		✓
TP526-0-0.1		✓
TP526-0.3-0.4		✓
TP526-0.7-0.8		✓
TP527-0-0.1		✓
TP527-0.2-0.3		✓
TP527-0.7-0.8		✓
TP528-0-0.1		✓
TP528-0.3-0.4		✓
TP529-0-0.1		✓
TP529-0.2-0.3		✓
TP530-0-0.1		✓
TP530-0.3-0.4		✓
TP530-0.7-0.8		✓
TP530-1.2-1.3		✓
TP531-0-0.1		✓
TP531-0.2-0.3		✓
TP531-0.4-0.5		✓
TP531-0.6-0.7		✓
TP532-0-0.1		✓
TP532-0.2-0.3		✓
TP532-0.5-0.6		✓
TP532-0.9-1.0		✓

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ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	PCBs in Soil	On Hold
SDUP501		✓
SDUP503		✓
SDUP505		✓
SDUP506		✓
SDUP507		✓
TB-501		✓
TS-501		✓
FR-SHOVEL-501		✓
TB-502		✓
TS-502		✓
FR-SHOVEL-502		✓
TP531 - [TRIPLICATE]-0.2-0.3		✓
TP532 - [TRIPLICATE]-0-0.1		✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Anna Bui

From: Vittal Boggaram <VBoggaram@jkenvironments.com.au>
Sent: Thursday, 14 August 2025 3:22 PM
To: Envirolab Sydney Sample Receipt
Cc: Aileen Hie; Victoria Reain
Subject: FW: Sample Receipt for 386894 E37757B Rouse Hill Hospital
Attachments: 386894-COC.pdf; 386894-SRA.pdf

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Team,

65

I refer to the attached job. Can we please schedule **PCB analysis on sample TP521-0.4-0.5** on a Standard Ta. Thanks.

Regards
Vittal Boggaram
Principal Environmental Engineer

EW REF: 386894-B
TAT: STANDARD
DUE: 21/8/25
AB

T: +61 2 9888 5000
D: +61 451 110 352
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JKEnvironments

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From: Aileen Hie <AHie@envirolab.com.au>
Sent: Friday, 25 July 2025 7:36 PM
To: Vittal Boggaram <VBoggaram@jkenvironments.com.au>
Subject: Sample Receipt for 386894 E37757B Rouse Hill Hospital

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Please refer to attached for:
a copy of the COC/paperwork received from you
a copy of our Sample Receipt Advice (SRA)
Please open and read the SRA as it contains important information.
Please let the lab know immediately if there are any issues.

Results will be available by 6.30pm on the date indicated.

PLEASE NOTE COMBO PRICES WILL ONLY APPLY IF COMBOS ARE SELECTED ON COC.

We have a new reporting format and would welcome your feedback. Sydney@envirolab.com.au

Please note that subcontracted testing or non routine testing may take significantly longer than just the standard 5 day TAT, contact the lab to get an approximate due date.

Enquiries should be made directly to:
customerservice@envirolab.com.au

Regards

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
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customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 387235

Client Details

Client	JK Environments
Attention	Vittal Boggaram
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E37757B Rouse Hill NSW - Hospital Site**
Number of Samples	11 Water
Date samples received	30/07/2025
Date completed instructions received	30/07/2025

Analysis Details

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

Samples were analysed as received from the client unless as indicated below in the method summaries. 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	06/08/2025
Date of Issue	06/08/2025

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Results Approved By
Amanda Chui, LC/Air Toxics Supervisor
Dragana Tomas, Senior Chemist
Sean McAlary, Senior Chemist
Tabitha Roberts, Senior Chemist
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

VOCs in water						
Our Reference		387235-1	387235-2	387235-3	387235-4	387235-5
Your Reference	UNITS	MW1	MW4	MW6	MW102	MW103
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Date Extracted	-	02/08/2025	02/08/2025	02/08/2025	02/08/2025	02/08/2025
Date Analysed	-	04/08/2025	04/08/2025	04/08/2025	04/08/2025	04/08/2025
Dichlorodifluoromethane	µg/L	<10	<10	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<1
2,2-dichloropropane	µg/L	<1	<1	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Benzene	µg/L	<1	<1	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	11	<1	<1	<1	<1
1,3-dichloropropane	µg/L	<1	<1	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1

VOCs in water						
Our Reference		387235-1	387235-2	387235-3	387235-4	387235-5
Your Reference	UNITS	MW1	MW4	MW6	MW102	MW103
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Bromoform	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
Styrene	µg/L	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1	<1	<1
o-xylene	µg/L	<1	<1	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	109	101	97	109	101
Surrogate Toluene-d8	%	97	97	96	97	97
Surrogate 4-Bromofluorobenzene	%	103	100	101	102	101

VOCs in water				
Our Reference	UNITS	387235-6	387235-7	387235-8
Your Reference		MW109	WDUP1	WDUP2
Date Sampled		29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water
Date Extracted	-	02/08/2025	02/08/2025	02/08/2025
Date Analysed	-	04/08/2025	04/08/2025	04/08/2025
Dichlorodifluoromethane	µg/L	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1
Chloroform	µg/L	<1	<1	<1
2,2-dichloropropane	µg/L	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Benzene	µg/L	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1
Toluene	µg/L	<1	<1	<1
1,3-dichloropropane	µg/L	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1

VOCs in water				
Our Reference		387235-6	387235-7	387235-8
Your Reference	UNITS	MW109	WDUP1	WDUP2
Date Sampled		29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water
Bromoform	µg/L	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2
Styrene	µg/L	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1
o-xylene	µg/L	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1
Surrogate Dibromofluoromethane	%	102	108	107
Surrogate Toluene-d8	%	97	97	97
Surrogate 4-Bromofluorobenzene	%	100	102	101

vTRH(C6-C10)/BTEXN in Water						
Our Reference		387235-1	387235-2	387235-3	387235-4	387235-5
Your Reference	UNITS	MW1	MW4	MW6	MW102	MW103
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	02/08/2025	02/08/2025	02/08/2025	02/08/2025	02/08/2025
Date analysed	-	04/08/2025	04/08/2025	04/08/2025	04/08/2025	04/08/2025
TRH C_6 - C_9	µg/L	17	<10	<10	<10	<10
TRH C_6 - C_{10}	µg/L	19	<10	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10	<10
Benzene	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	11	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
o-xylene	µg/L	<1	<1	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	109	101	97	109	101
Surrogate Toluene-d8	%	97	97	96	97	97
Surrogate 4-Bromofluorobenzene	%	103	100	101	102	101

vTRH(C6-C10)/BTEXN in Water						
Our Reference		387235-6	387235-7	387235-8	387235-9	387235-10
Your Reference	UNITS	MW109	WDUP1	WDUP2	TB-1	TS-1
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	02/08/2025	02/08/2025	02/08/2025	02/08/2025	02/08/2025
Date analysed	-	04/08/2025	04/08/2025	04/08/2025	04/08/2025	04/08/2025
TRH C_6 - C_9	µg/L	<10	<10	<10	<10	[NA]
TRH C_6 - C_{10}	µg/L	<10	<10	<10	<10	[NA]
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10	[NA]
Benzene	µg/L	<1	<1	<1	<1	117%
Toluene	µg/L	<1	<1	<1	<1	114%
Ethylbenzene	µg/L	<1	<1	<1	<1	113%
m+p-xylene	µg/L	<2	<2	<2	<2	108%
o-xylene	µg/L	<1	<1	<1	<1	112%
Naphthalene	µg/L	<1	<1	<1	<1	[NA]
Surrogate Dibromofluoromethane	%	102	108	107	104	107
Surrogate Toluene-d8	%	97	97	97	97	102
Surrogate 4-Bromofluorobenzene	%	100	102	101	101	100

vTRH(C6-C10)/BTEXN in Water		
Our Reference		387235-11
Your Reference	UNITS	FR-DIP-1
Date Sampled		29/07/2025
Type of sample		Water
Date extracted	-	02/08/2025
Date analysed	-	04/08/2025
TRH C_6 - C_9	µg/L	<10
TRH C_6 - C_{10}	µg/L	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	97
Surrogate Toluene-d8	%	96
Surrogate 4-Bromofluorobenzene	%	101

svTRH (C10-C40) in Water						
Our Reference		387235-1	387235-2	387235-3	387235-4	387235-5
Your Reference	UNITS	MW1	MW4	MW6	MW102	MW103
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025
Date analysed	-	01/08/2025	01/08/2025	01/08/2025	01/08/2025	01/08/2025
TRH C_{10} - C_{14}	µg/L	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	77	72	78	78	75

svTRH (C10-C40) in Water						
Our Reference		387235-6	387235-7	387235-8	387235-9	387235-11
Your Reference	UNITS	MW109	WDUP1	WDUP2	TB-1	FR-DIP-1
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025
Date analysed	-	01/08/2025	01/08/2025	01/08/2025	01/08/2025	01/08/2025
TRH C_{10} - C_{14}	µg/L	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100	<100	210
TRH C_{29} - C_{36}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50	<50	<50	210
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50	<50	200
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	<50	<50	200
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50	<50	<50	200
Surrogate o-Terphenyl	%	70	75	73	71	73

PAHs in Water						
Our Reference		387235-1	387235-2	387235-3	387235-4	387235-5
Your Reference	UNITS	MW1	MW4	MW6	MW102	MW103
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025
Date analysed	-	04/08/2025	04/08/2025	04/08/2025	04/08/2025	04/08/2025
Naphthalene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	90	89	87	92	86

PAHs in Water						
Our Reference		387235-6	387235-7	387235-8	387235-9	387235-11
Your Reference	UNITS	MW109	WDUP1	WDUP2	TB-1	FR-DIP-1
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025
Date analysed	-	04/08/2025	04/08/2025	04/08/2025	04/08/2025	04/08/2025
Naphthalene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1	<0.1	<0.1	0.2
Fluorene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1	<0.1	<0.1	0.19
Surrogate p-Terphenyl-d14	%	85	89	88	85	90

HM in water - dissolved						
Our Reference		387235-1	387235-2	387235-3	387235-4	387235-5
Your Reference	UNITS	MW1	MW4	MW6	MW102	MW103
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025
Date analysed	-	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025
Arsenic-Dissolved	µg/L	1	<1	<1	2	<1
Cadmium-Dissolved	µg/L	<0.1	0.1	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	<1	<1	<1	<1	<1
Copper-Dissolved	µg/L	<1	2	<1	<1	<1
Lead-Dissolved	µg/L	<1	<1	<1	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	9	20	21	23	9
Zinc-Dissolved	µg/L	7	75	34	21	8

HM in water - dissolved						
Our Reference		387235-6	387235-7	387235-8	387235-9	387235-11
Your Reference	UNITS	MW109	WDUP1	WDUP2	TB-1	FR-DIP-1
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025
Date analysed	-	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025
Arsenic-Dissolved	µg/L	2	3	<1	<1	<1
Cadmium-Dissolved	µg/L	<0.1	0.1	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	<1	<1	<1	<1	<1
Copper-Dissolved	µg/L	<1	<1	<1	<1	<1
Lead-Dissolved	µg/L	<1	<1	<1	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	6	24	18	<1	<1
Zinc-Dissolved	µg/L	4	22	30	<1	3

PFAS in Waters Short			
Our Reference	UNITS	387235-9	387235-11
Your Reference		TB-1	FR-DIP-1
Date Sampled		29/07/2025	29/07/2025
Type of sample		Water	Water
Date prepared	-	01/08/2025	01/08/2025
Date analysed	-	01/08/2025	01/08/2025
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	105	99
Surrogate $^{13}C_2$ *PFOA*	%	97	96
Extracted ISTD $^{13}C_3$ *PFBS*	%	97	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%	96	97
Extracted ISTD $^{13}C_4$ *PFOS*	%	96	98
Extracted ISTD $^{13}C_4$ *PFOA*	%	98	101
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	106	110
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	103	101
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01
Total Positive PFOA & PFOS	µg/L	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01

PFAS in Waters Trace Extended						
Our Reference		387235-1	387235-2	387235-3	387235-4	387235-5
Your Reference	UNITS	MW1	MW4	MW6	MW102	MW103
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	01/08/2025	01/08/2025	01/08/2025	01/08/2025	01/08/2025
Date analysed	-	01/08/2025	01/08/2025	01/08/2025	01/08/2025	01/08/2025
Perfluorobutanesulfonic acid	µg/L	0.004	0.0005	0.002	<0.0004	<0.0004
Perfluoropentanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.0005	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	0.001	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanesulfonic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.01	<0.01	<0.002	<0.002	<0.002
Perfluorohexanoic acid	µg/L	0.0009	<0.0004	<0.0004	0.0008	<0.0004
Perfluoroheptanoic acid	µg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Perfluorooctanoic acid PFOA	µg/L	0.001	0.0002	0.0003	<0.0002	<0.0002
Perfluorononanoic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
4:2 FTS	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 FTS	µg/L	0.0069	0.0006	<0.0004	0.010	0.002
8:2 FTS	µg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
10:2 FTS	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf-amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Surrogate $^{13}C_8$ *PFOS*	%	106	103	107	104	99
Surrogate $^{13}C_2$ *PFOA*	%	103	102	107	110	100
Extracted ISTD $^{13}C_3$ *PFBS*	%	60	62	79	74	73
Extracted ISTD $^{18}O_2$ *PFHxS*	%	97	98	104	109	108
Extracted ISTD $^{13}C_4$ *PFOS*	%	77	82	87	92	89
Extracted ISTD $^{13}C_4$ *PFBA*	%	#	#	#	#	#

PFAS in Waters Trace Extended						
Our Reference		387235-1	387235-2	387235-3	387235-4	387235-5
Your Reference	UNITS	MW1	MW4	MW6	MW102	MW103
Date Sampled		29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water	Water	Water
Extracted ISTD $^{13}C_3$ *PFPeA*	%	21	28	54	41	49
Extracted ISTD $^{13}C_2$ *PFHxA*	%	61	69	91	92	95
Extracted ISTD $^{13}C_4$ *PFHpA*	%	103	99	111	116	115
Extracted ISTD $^{13}C_4$ *PFOA*	%	101	94	101	102	105
Extracted ISTD $^{13}C_5$ *PFNA*	%	110	114	124	125	117
Extracted ISTD $^{13}C_2$ *PFDA*	%	113	126	137	145	130
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	120	150	161	170	157
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	79	100	113	118	110
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	112	161	166	173	168
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	73	66	83	89	95
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	#	192	#	#	#
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	#	#	#	#	#
Extracted ISTD $^{13}C_8$ *FOSA*	%	68	108	118	112	118
Extracted ISTD d_3 *N MeFOSA*	%	104	105	101	107	105
Extracted ISTD d_5 *N EtFOSA*	%	106	101	100	105	101
Extracted ISTD d_7 *N MeFOSE*	%	98	98	100	96	94
Extracted ISTD d_9 *N EtFOSE*	%	97	100	95	97	100
Extracted ISTD d_3 *N MeFOSAA*	%	166	144	180	178	174
Extracted ISTD d_5 *N EtFOSAA*	%	190	168	#	#	#
Total Positive PFHxS & PFOS	µg/L	0.002	<0.0002	<0.0002	<0.0002	<0.0002
Total Positive PFOS & PFOA	µg/L	0.0027	0.0002	0.0003	<0.0002	<0.0002
Total Positive PFAS	µg/L	0.015	0.001	0.002	0.011	0.0022

PFAS in Waters Trace Extended				
Our Reference		387235-6	387235-7	387235-8
Your Reference	UNITS	MW109	WDUP1	WDUP2
Date Sampled		29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water
Date prepared	-	01/08/2025	01/08/2025	01/08/2025
Date analysed	-	01/08/2025	01/08/2025	01/08/2025
Perfluorobutanesulfonic acid	µg/L	<0.0004	<0.0004	0.002
Perfluoropentanesulfonic acid	µg/L	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.0002	<0.0002	<0.0002
Perfluoroheptanesulfonic acid	µg/L	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	<0.0002	<0.0002	<0.0002
Perfluorodecanesulfonic acid	µg/L	<0.002	<0.002	<0.002
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.002	<0.002	<0.002
Perfluorohexanoic acid	µg/L	<0.0004	0.0009	<0.0004
Perfluoroheptanoic acid	µg/L	<0.0004	<0.0004	<0.0004
Perfluorooctanoic acid PFOA	µg/L	<0.0002	<0.0002	0.0003
Perfluorononanoic acid	µg/L	<0.001	<0.001	<0.001
Perfluorodecanoic acid	µg/L	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	µg/L	<0.002	<0.002	<0.002
Perfluorododecanoic acid	µg/L	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	µg/L	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	µg/L	<0.05	<0.05	<0.05
4:2 FTS	µg/L	<0.001	<0.001	<0.001
6:2 FTS	µg/L	<0.0004	0.010	<0.0004
8:2 FTS	µg/L	<0.0004	<0.0004	<0.0004
10:2 FTS	µg/L	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	µg/L	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5	<0.5
MePerfluorooctanesulf-amid oacetic acid	µg/L	<0.002	<0.002	<0.002
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002
Surrogate $^{13}C_8$ *PFOS*	%	107	105	103
Surrogate $^{13}C_2$ *PFOA*	%	99	102	105
Extracted ISTD $^{13}C_3$ *PFBS*	%	74	70	78
Extracted ISTD $^{18}O_2$ *PFHxS*	%	107	109	106
Extracted ISTD $^{13}C_4$ *PFOS*	%	84	88	88
Extracted ISTD $^{13}C_4$ *PFBA*	%	#	#	#

PFAS in Waters Trace Extended				
Our Reference	UNITS	387235-6	387235-7	387235-8
Your Reference		MW109	WDUP1	WDUP2
Date Sampled		29/07/2025	29/07/2025	29/07/2025
Type of sample		Water	Water	Water
Extracted ISTD $^{13}C_3$ *PFPeA*	%	44	40	56
Extracted ISTD $^{13}C_2$ *PFHxA*	%	89	90	87
Extracted ISTD $^{13}C_4$ *PFHpA*	%	113	113	110
Extracted ISTD $^{13}C_4$ *PFOA*	%	106	101	101
Extracted ISTD $^{13}C_5$ *PFNA*	%	97	121	120
Extracted ISTD $^{13}C_2$ *PFDA*	%	132	138	124
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	155	155	159
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	107	110	112
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	173	163	182
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	86	89	87
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	#	#	#
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	#	#	#
Extracted ISTD $^{13}C_8$ *FOSA*	%	114	114	121
Extracted ISTD d_3 *N MeFOSA*	%	100	106	101
Extracted ISTD d_5 *N EtFOSA*	%	104	103	103
Extracted ISTD d_7 *N MeFOSE*	%	102	98	94
Extracted ISTD d_9 *N EtFOSE*	%	98	100	98
Extracted ISTD d_3 *N MeFOSAA*	%	162	181	153
Extracted ISTD d_5 *N EtFOSAA*	%	#	#	#
Total Positive PFHxS & PFOS	µg/L	<0.0002	<0.0002	<0.0002
Total Positive PFOS & PFOA	µg/L	<0.0002	<0.0002	0.0003
Total Positive PFAS	µg/L	<0.0002	0.011	0.0021

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS. Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
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-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-023	Water samples are analysed directly 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-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date Extracted	-			02/08/2025	1	02/08/2025	04/08/2025		02/08/2025	[NT]
Date Analysed	-			04/08/2025	1	04/08/2025	05/08/2025		04/08/2025	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	115	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	1	<1	<1	0	115	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	122	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	113	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	115	[NT]
Dibromomethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	116	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	114	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	1	11	8	32	115	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	125	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	111	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	112	[NT]
Bromoform	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	113	[NT]
Styrene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	114	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	1	109	107	2	105	[NT]
Surrogate Toluene-d8	%		Org-023	96	1	97	97	0	100	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	99	1	103	103	0	99	[NT]

QUALITY CONTROL: VOCs in water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date Extracted	-			[NT]	8	02/08/2025	04/08/2025		[NT]	[NT]
Date Analysed	-			[NT]	8	04/08/2025	05/08/2025		[NT]	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	[NT]	8	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	[NT]	8	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	[NT]	8	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	[NT]	8	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	[NT]	8	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	[NT]	8	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
2,2-dichloropropane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,1-dichloropropene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Dibromomethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Bromodichloromethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,2-dibromoethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Bromoform	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	[NT]	8	<2	<2	0	[NT]	[NT]
Styrene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
o-xylene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	[NT]	8	107	106	1	[NT]	[NT]
Surrogate Toluene-d8	%		Org-023	[NT]	8	97	97	0	[NT]	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	[NT]	8	101	102	1	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			02/08/2025	1	02/08/2025	04/08/2025		02/08/2025	[NT]
Date analysed	-			04/08/2025	1	04/08/2025	05/08/2025		04/08/2025	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	1	17	12	34	114	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	1	19	14	30	114	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	115	[NT]
Toluene	µg/L	1	Org-023	<1	1	11	8	32	115	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	112	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	113	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	114	[NT]
Naphthalene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	1	109	107	2	105	[NT]
Surrogate Toluene-d8	%		Org-023	96	1	97	97	0	100	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	99	1	103	103	0	99	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	8	02/08/2025	04/08/2025		[NT]	[NT]
Date analysed	-			[NT]	8	04/08/2025	05/08/2025		[NT]	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	[NT]	8	<10	<10	0	[NT]	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	[NT]	8	<10	<10	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	[NT]	8	<2	<2	0	[NT]	[NT]
o-xylene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Naphthalene	µg/L	1	Org-023	[NT]	8	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	[NT]	8	107	106	1	[NT]	[NT]
Surrogate Toluene-d8	%		Org-023	[NT]	8	97	97	0	[NT]	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	[NT]	8	101	102	1	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	387235-2
Date extracted	-			31/07/2025	1	31/07/2025	31/07/2025		31/07/2025	31/07/2025
Date analysed	-			01/08/2025	1	01/08/2025	01/08/2025		01/08/2025	01/08/2025
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	1	<50	<50	0	103	88
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	1	<100	<100	0	102	88
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	1	<100	<100	0	100	82
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	1	<50	<50	0	103	88
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	1	<100	<100	0	102	88
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	1	<100	<100	0	100	82
Surrogate o-Terphenyl	%		Org-020	81	1	77	75	3	105	91

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	31/07/2025	31/07/2025		[NT]	[NT]
Date analysed	-			[NT]	11	01/08/2025	01/08/2025		[NT]	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	[NT]	11	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	[NT]	11	210	220	5	[NT]	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	[NT]	11	<100	<100	0	[NT]	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	[NT]	11	200	210	5	[NT]	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	[NT]	11	<100	<100	0	[NT]	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	[NT]	11	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	11	73	77	5	[NT]	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	387235-2
Date extracted	-			31/07/2025	1	31/07/2025	31/07/2025		31/07/2025	31/07/2025
Date analysed	-			04/08/2025	1	04/08/2025	04/08/2025		04/08/2025	04/08/2025
Naphthalene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	89	85
Acenaphthylene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	89	74
Fluorene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	85	74
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	80
Anthracene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	78
Pyrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	83
Benzo(a)anthracene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	72
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	76
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	98	1	90	83	8	97	87

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	31/07/2025	31/07/2025		[NT]	[NT]
Date analysed	-			[NT]	11	04/08/2025	04/08/2025		[NT]	[NT]
Naphthalene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	[NT]	11	0.2	0.2	0	[NT]	[NT]
Fluorene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Anthracene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Pyrene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	[NT]	11	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	11	90	92	2	[NT]	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W6	387235-2
Date prepared	-			31/07/2025	1	31/07/2025	31/07/2025		31/07/2025	31/07/2025
Date analysed	-			31/07/2025	1	31/07/2025	31/07/2025		31/07/2025	31/07/2025
Arsenic-Dissolved	µg/L	1	Metals-022	<1	1	1	1	0	101	109
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	1	<0.1	<0.1	0	98	110
Chromium-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	101	114
Copper-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	102	112
Lead-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	101	97
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	1	<0.05	<0.05	0	94	101
Nickel-Dissolved	µg/L	1	Metals-022	<1	1	9	9	0	101	115
Zinc-Dissolved	µg/L	1	Metals-022	<1	1	7	7	0	98	119

QUALITY CONTROL: PFAS in Waters Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	387235-11
Date prepared	-			01/08/2025	9	01/08/2025	01/08/2025		01/08/2025	01/08/2025
Date analysed	-			01/08/2025	9	01/08/2025	01/08/2025		01/08/2025	01/08/2025
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	9	<0.01	<0.01	0	99	105
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	9	<0.01	<0.01	0	96	103
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	9	<0.01	<0.01	0	92	105
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	9	<0.01	<0.01	0	94	109
6:2 FTS	µg/L	0.01	Org-029	<0.01	9	<0.01	<0.01	0	91	102
8:2 FTS	µg/L	0.02	Org-029	<0.02	9	<0.02	<0.02	0	95	99
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	96	9	105	97	8	95	98
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	98	9	97	99	2	98	96
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	102	9	97	94	3	92	92
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	102	9	96	98	2	100	97
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	98	9	96	96	0	101	95
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	104	9	98	96	2	102	95
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	108	9	106	98	8	103	96
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	100	9	103	96	7	105	106

QUALITY CONTROL: PFAS in Waters Trace Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			01/08/2025	[NT]	[NT]	[NT]	[NT]	01/08/2025	[NT]
Date analysed	-			01/08/2025	[NT]	[NT]	[NT]	[NT]	01/08/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluoropentanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorodecanesulfonic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorobutanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluoropentanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluorohexanoic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	110	[NT]
Perfluoroheptanoic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorononanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	115	[NT]
Perfluorodecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluoroundecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorododecanoic acid	µg/L	0.005	Org-029	<0.005	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorotridecanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	92	[NT]
Perfluorotetradecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	101	[NT]
4:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	106	[NT]
6:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	109	[NT]
8:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	125	[NT]
10:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	124	[NT]
Perfluorooctane sulfonamide	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	108	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	84	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	125	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	105	[NT]
MePerfluorooctanesulf-amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	108	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	111	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: PFAS in Waters Trace Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD $^{13}C_3$ PFBS	%		Org-029	65	[NT]	[NT]	[NT]	[NT]	71	[NT]
Extracted ISTD $^{18}O_2$ PFHxS	%		Org-029	75	[NT]	[NT]	[NT]	[NT]	86	[NT]
Extracted ISTD $^{13}C_4$ PFOS	%		Org-029	71	[NT]	[NT]	[NT]	[NT]	82	[NT]
Extracted ISTD $^{13}C_4$ PFBA	%		Org-029	89	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_3$ PFPeA	%		Org-029	79	[NT]	[NT]	[NT]	[NT]	85	[NT]
Extracted ISTD $^{13}C_2$ PFHxA	%		Org-029	83	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD $^{13}C_4$ PFHpA	%		Org-029	83	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD $^{13}C_4$ PFOA	%		Org-029	84	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_5$ PFNA	%		Org-029	87	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_2$ PFDA	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_2$ PFUnDA	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	113	[NT]
Extracted ISTD $^{13}C_2$ PFDoDA	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_2$ PFTeDA	%		Org-029	69	[NT]	[NT]	[NT]	[NT]	59	[NT]
Extracted ISTD $^{13}C_2$ 4:2FTS	%		Org-029	125	[NT]	[NT]	[NT]	[NT]	132	[NT]
Extracted ISTD $^{13}C_2$ 6:2FTS	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	127	[NT]
Extracted ISTD $^{13}C_2$ 8:2FTS	%		Org-029	142	[NT]	[NT]	[NT]	[NT]	149	[NT]
Extracted ISTD $^{13}C_8$ FOSA	%		Org-029	86	[NT]	[NT]	[NT]	[NT]	88	[NT]
Extracted ISTD d_3 N MeFOSA	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD d_5 N EtFOSA	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD d_7 N MeFOSE	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: PFAS in Waters Trace Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	116	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	129	[NT]	[NT]	[NT]	[NT]	143	[NT]

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.

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.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

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.

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.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

TRH Water(C10-C40) NEPM - The positive result in the rinsate sample is due to a single peak with no hydrocarbon profile that is consistent with the use of plastic containers.

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

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Vittal Boggaram

Sample Login Details

Your reference	E37757B Rouse Hill NSW - Hospital Site
Envirolab Reference	387235
Date Sample Received	30/07/2025
Date Instructions Received	30/07/2025
Date Results Expected to be Reported	06/08/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	11 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	6
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
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Sample ID	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	HM in water - dissolved	PFAS in Waters Short	PFAS in Waters Trace Extended
MW1	✓	✓	✓	✓	✓		✓
MW4	✓	✓	✓	✓	✓		✓
MW6	✓	✓	✓	✓	✓		✓
MW102	✓	✓	✓	✓	✓		✓
MW103	✓	✓	✓	✓	✓		✓
MW109	✓	✓	✓	✓	✓		✓
WDUP1	✓	✓	✓	✓	✓		✓
WDUP2	✓	✓	✓	✓	✓		✓
TB-1		✓	✓	✓	✓	✓	
TS-1		✓					
FR-DIP-1		✓	✓	✓	✓	✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E37757B Date Results Required: STANDARD Page: 1 of 1	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Vittal Boggaram VBoggaram@jkenvironments.com.au

Location:	Rouse Hill, NSW - Hospital Site	Sample Preserved in Esky on Ice
Sampler:	CB	Tests Required

Date Sampled	Lab Ref:	Sample Number	Sample Containers	PID	Sample Description	#3L	PFAS (Trace Level Extended)	VOCs	BTEX	PFAS (Short Suite)							
29/07/2025	1	MW1	##	0.1	Water Sample	X	X	X									
29/07/2025	2	MW4	##	0	Water Sample	X	X	X									
29/07/2025	3	MW6	##	0.3	Water Sample	X	X	X									
29/07/2025	4	MW102	##	0	Water Sample	X	X	X									
29/07/2025	5	MW103	##	0.1	Water Sample	X	X	X									
29/07/2025	6	MW109	##	0.3	Water Sample	X	X	X									
29/07/2025	7	WDUP1	G1, V, H, PVC, PFAS	-	Duplicate	X	X	X									
29/07/2025	8	WDUP2	G1, V, H, PVC, PFAS	-	Duplicate	X	X	X									
29/07/2025	9	TB-1	G1, V, H, PFAS	-	Trip Blank	X				X							
29/07/2025	10	TS-1	V	-	Trip Spike				X								
29/07/2025	11	FR-DIP-1	G1, V, H, PVC, PFAS	-	Field Rinsate	X				X							

ENVIROLAB GROUP

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

Job No: 387235

Date Received: 30-7-25

Time Received: 1600

Received By: ACD

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

Remarks (comments/detection limits required):	Sample Containers: ## Each sample includes: x2 amber bottles, x4 HCl preserved glass vials, x1 unpreserved plastic bottles, x2 nitric acid preserved bottles (1 is field filtered), x1 sulphuric acid preserved bottle, x1 sterile container and 2x PFAS bottles; G1 - 100mL Amber Glass Bottle; V - BTEX Vial; H - HNO3 bottle; PVC - HDPE Plastic Bottles

Relinquished By: VB	Date: 30/07/25	Time: 10:00	Received By:	Date:

Appendix F: Report Explanatory Notes

QA/QC Definitions

The QA/QC terms used in this report are defined below. The definitions are in accordance with US EPA publication SW-846, entitled *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (1994)[31] methods and those described in *Environmental Sampling and Analysis, A Practical Guide,* (1991)[32]. The NEPM (2013) is consistent with these documents.

A. Practical Quantitation Limit (PQL), Limit of Reporting (LOR) & Estimated Quantitation Limit (EQL)

These terms all refer to the concentration above which results can be expressed with a minimum 95% confidence level. The laboratory reporting limits are generally set at ten times the standard deviation for the Method Detection Limit for each specific analyte. For the purposes of this report the LOR, PQL, and EQL are considered to be equivalent.

When assessing laboratory data it should be borne in mind that values at or near the PQL have two important limitations: *"The uncertainty of the measurement value can approach, and even equal, the reported value. Secondly, confirmation of the analytes reported is virtually impossible unless identification uses highly selective methods. These issues diminish when reliably measurable amounts of analytes are present. Accordingly, legal and regulatory actions should be limited to data at or above the reliable detection limit*" (Keith, 1991).

B. Precision

The degree to which data generated from repeated measurements differ from one another due to random errors. Precision is measured using the standard deviation or Relative Percent Difference (RPD).

C. Accuracy

Accuracy is a measure of the agreement between an experimental result and the true value of the parameter being measured (i.e. the proximity of an averaged result to the true value, where all random errors have been statistically removed). The assessment of accuracy for an analysis can be achieved through the analysis of known reference materials or assessed by the analysis of surrogates, field blanks, trip spikes and matrix spikes. Accuracy is typically reported as percent recovery.

D. Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is primarily dependent upon the design and implementation of the sampling program. Representativeness of the data is partially ensured by the avoidance of contamination, adherence to sample handing and analysis protocols and use of proper chain-of-custody and documentation procedures.

E. Completeness

Completeness is a measure of the number of valid measurements in a data set compared to the total number of measurements made and overall performance against DQIs. The following information is assessed for completeness:

- Chain-of-custody forms;
- Sample receipt form;
- All sample results reported;
- All blank data reported;

[31] US EPA, (1994). *SW-846: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.* (US EPA SW-846)

[32] Keith., H, (1991). *Environmental Sampling and Analysis, A Practical Guide*

- All laboratory duplicate and RPDs calculated;
- All surrogate spike data reported;
- All matrix spike and lab control spike (LCS) data reported and RPDs calculated;
- Spike recovery acceptable limits reported; and
- NATA stamp on reports.

F. Comparability

Comparability is the evaluation of the similarity of conditions (e.g. sample depth, sample homogeneity) under which separate sets of data are produced. Data comparability checks include a bias assessment that may arise from the following sources:

- Collection and analysis of samples by different personnel; Use of different techniques;
- Collection and analysis by the same personnel using the same methods but at different times; and
- Spatial and temporal changes (due to environmental dynamics).

G. Blanks

The purpose of laboratory and field blanks is to check for artefacts and interferences that may arise during sampling, transport and analysis.

H. Matrix Spikes

Samples are spiked with laboratory grade standards to detect interactive effects between the sample matrix and the analytes being measured. Matrix Spikes are reported as a percent recovery and are prepared for 1 in every 20 samples. Sample batches that contain less than 20 samples may be reported with a Matrix Spike from another batch. The percent recovery is calculated using the formula below. Acceptable recovery limits are 70% to 130%.

$$\frac{\text{(Spike Sample Result – Sample Result) x 100}}{\text{Concentration of Spike Added}}$$

I. Surrogate Spikes

Samples are spiked with a known concentration of compounds that are chemically related to the analyte being investigated but unlikely to be detected in the environment. The purpose of the Surrogate Spikes is to check the accuracy of the analytical technique. Surrogate Spikes are reported as percent recovery.

J. Duplicates

Laboratory duplicates measure precision, expressed as Relative Percent Difference. Duplicates are prepared from a single field sample and analysed as two separate extraction procedures in the laboratory. The RPD is calculated using the formula where D1 is the sample concentration and D2 is the duplicate sample concentration:

$$\frac{(D1 - D2) \times 100}{\{(D1 + D2)/2\}}$$

Appendix G: Data (QA/QC) Evaluation

Data (QA/QC) Evaluation

A. INTRODUCTION

This Data (QA/QC) Evaluation forms part of the validation process for the DQOs documented in Section 4.1 of this report. Checks were made to assess the data in terms of precision, accuracy, representativeness, comparability and completeness. These 'PARCC' parameters are referred to collectively as DQIs and are defined in the Report Explanatory Notes attached in the report appendices.

1. Field and Laboratory Considerations

The quality of the analytical data produced for this project has been considered in relation to the following:

- Sample collection, storage, transport and analysis;
- Laboratory PQLs;
- Field QA/QC results; and
- Laboratory QA/QC results.

2. Field QA/QC Samples and Analysis

The results for the field QA/QC samples are detailed in the laboratory summary tables (Table Q1 to Table Q4 inclusive) attached to the investigation report and are discussed in the subsequent sections of this Data (QA/QC) Evaluation report. A summary of the field QA/QC samples collected and analysed for this investigation is provided in the following table:

Sample Type	Number Analysed	Frequency (of Sample Type)
Intra-laboratory duplicate (soil)	4	Approximately 9-13% of primary samples
Inter-laboratory duplicate (soil)	4	As above
Intra-laboratory duplicate (groundwater)	2	Approximately 33% of primary samples
Inter-laboratory duplicate (groundwater)	NA	JKE note that due to a scheduling error, an additional field duplicate sample was analysed as an intra-lab duplicate. This is discussed further below.
Trip spikes Soil Water	 2 1	Two of the soil media and one of water media for the investigation to demonstrate adequacy of preservation, storage and transport methods.
Trip blanks Soil Water	 2 1	Two of the soil media and one of water media for the investigation to demonstrate adequacy of preservation, storage and transport methods.

Sample Type	Number Analysed	Frequency (of Sample Type)
Rinsates Soil sampling using a shovel Groundwater sampling using a dip meter	 2 1	Two of the soil media and one of water media for the investigation to demonstrate adequacy of preservation, storage and transport methods.

3. Data Assessment Criteria

JKE adopted the following criteria for assessing the field and laboratory QA/QC analytical results:

Field Duplicates

Acceptable targets for precision of field duplicates in this report will be 30% or less, consistent with NEPM (2013). RPD failures will be considered qualitatively on a case-by-case basis taking into account factors such as the concentrations used to calculate the RPD (i.e. RPD exceedance where concentrations are close to the PQL are typically not as significant as those where concentrations are reported at least five or 10 times the PQL), sample type, collection methods and the specific analyte where the RPD exceedance was reported.

Field/Trip Blanks and Rinsates

Acceptable targets for field blank and rinsate samples in this report will be less than the PQL for organic analytes. Metals will be considered on a case-by-case basis with regards to typical background concentrations in soils and published drinking water guidelines for waters.

Trip Spikes

Acceptable targets for trip spike samples in this report will be 70% to 130%.

Laboratory QA/QC

The suitability of the laboratory data is assessed against the laboratory QA/QC criteria which is outlined in the laboratory reports. These criteria were developed and implemented in accordance with the laboratory's NATA accreditation and align with the acceptable limits for QA/QC samples as outlined in NEPM (2013) and other relevant guidelines.

A summary of the acceptable limits adopted by the primary laboratory (Envirolab) is provided below:

RPDs

- Results that are <5 times the PQL, any RPD is acceptable; and
- Results >5 times the PQL, RPDs between 0-50% are acceptable.

Laboratory Control Samples (LCS) and Matrix Spikes

- 70-130% recovery acceptable for metals and inorganics;
- 60-140% recovery acceptable for organics; and
- 10-140% recovery acceptable for VOCs.

Surrogate Spikes

- 60-140% recovery acceptable for general organics; and
- 10-140% recovery acceptable for VOCs.

Method Blanks

- All results less than PQL.

B. DATA EVALUATION

1. Sample Collection, Storage, Transport and Analysis

Samples were collected by trained field staff in accordance with our standard sampling procedures. Field sampling procedures were designed to be consistent with relevant guidelines, including NEPM (2013) and other guidelines made under the CLM Act 1997.

Appropriate sample preservation, handling and storage procedures were adopted. Laboratory analysis was undertaken within specified holding times in accordance with Schedule B(3) of NEPM (2013) and the laboratory NATA accredited methodologies.

JKE note that the temperature on receipt of soil samples was reported to be up to 11°C. JKE understand that the temperature is measured at the laboratory using an infrared temperature probe by scanning the outside of the sample container (i.e. one sample jar/container at the time of registering the samples). This procedure is not considered to be robust as there is a potential for the outside of the jar to warm to ambient temperature, or at least to increase from that of the internal contents, relatively quickly. On this basis, JKE is of the opinion that the temperatures reported on the Sample Receipts are unlikely to be reliable or representative of the overall batch. This is further supported by the trip spike recovery results (discussed further below) which reported adequate recovery in the range of 102% to 117%.

Whilst it could be argued that 15% loss of volatiles may have led to these contaminants being under-reported (i.e. the lower end of the trip spike recovery was 102%), it is noted that all BTEX results and volatile TRHs (F1 and F2) were below the PQLs and even a nominal 15% increase of TRH/BTEX concentrations in these samples would not result in exceedance of the SAC.

Envirolab noted that the asbestos results were reported to be consistent with the recommendations in NEPM (2013), however this level of reporting is outside the scope of their NATA accreditation. In the absence of other available analytical methods for asbestos, this was found to be acceptable for the purpose of this investigation.

JKE note that due to a scheduling error, the analysis for TRH, BTEX, PAH, OCP, OPP and PCB in samples TP503 (0.2-0.3m) and TP504 (0-0.1m) were undertaken outside the holding time as report in 386894-A. Additional testing of soil sample TP521 (0.4-0.5m) for PCBs was also outside the holding time as reported in 386894-B. The results are not considered to impact on the validity of the data as the samples were stored in lab containers with appropriate seals and refrigerated at the laboratory in a controlled environment. Significant changes in chemical composition is unlikely to have occurred that would have significance to data validity. All other analysis was undertaken within the recommended holding times.

JKE also note that groundwater field duplicates were only analysed as intra-laboratory duplicates due to a scheduling error. This is not considered to impact on the validity of the data. The duplicate sample analysis indicated good correlation between the primary and duplicate samples, as discussed further below. On this basis, JKE is of the opinion that the omission of inter-laboratory duplicate analysis does not affect the quality of the dataset as a whole or the outcome of the investigation.

Review of the project data also indicated that:

- COC documentation was adequately maintained;
- Sample receipt advice documentation was provided for all sample batches;
- All analytical results were reported; and
- Consistent units were used to report the analysis results.

2. Laboratory PQLs

Appropriate PQLs were adopted for the analysis and all PQLs were below the SAC with the exception of the anthracene PQL for groundwater analysis which was 10 times greater than the ecological SAC. In light of the PAH concentrations reported for soil and groundwater, JKE is of the opinion that this is not significant, and it does not affect the quality of the dataset as a whole or the outcome of the investigation.

3. Field QA/QC Sample Results

Field Duplicates

The results indicated that field precision was acceptable. RPD non-conformances were reported for some analytes as shown on Tables Q1 to Q4 attached in the appendices. The elevations were relatively minor and associated with the following:

- Attributed to sample heterogeneity and the difficulties associated with obtaining homogenous duplicate samples of heterogeneous matrices; and/or
- Analytical results reported very close to the PQLs.

As both the primary and duplicate sample results were less than the SAC, the exceedances are not considered to have had an adverse impact on the data set as a whole.

Field/Trip Blanks

The soil trip blank analysis results were all less than the PQLs with the exception of chromium, lead and zinc with reported concentrations of 3mg/kg, 4mg/kg and 3mg/kg respectively. Low level metals concentrations are typical in washed sand which is utilised as blank material. In JKE's experience, the concentrations reported were consistent with background concentrations in a sand matrix and were not indicative of cross-contamination. On this basis, cross contamination between samples that may have significance for data validity did not occur.

All of the groundwater trip blank results were below the PQL.

Rinsates

Majority of the equipment rinsate results were below the PQL. Slight detections of selected metals and light fraction TRH were noted. Such low concentrations are often detected in potable water used for the decontamination process. The TRH and heavy metals were considered to be associated with the potable

water source used for the rise water (notably TRH is associated with trihalomethanes which are from the chlorination/disinfection process). In JKE's experience, the concentrations reported were consistent with background concentrations and were not indicative of cross-contamination.

Trip Spikes

The results ranged from 102% to 117% and indicated that field preservation methods were appropriate.

4. Laboratory QA/QC

The analytical methods implemented by the laboratory were performed in accordance with their NATA accreditation and were consistent with Schedule B(3) of NEPM (2013). The frequency of data reported for the laboratory QA/QC (i.e. duplicates, spikes, blanks, LCS) was considered to be acceptable for the purpose of this investigation.

A review of the laboratory QA/QC data identified the following minor non-conformances:

Lab Report 386894:

- PAHs in Soil - The RPD for duplicate results is accepted due to the non-homogenous nature of sample 386894-30.
- PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).
- Acid Extractable Metals in Soil:
  - The laboratory RPD acceptance criteria has been exceeded for 386894-90 for Zn. Therefore, a triplicate result has been issued as laboratory sample number 386894-108.
  - The laboratory RPD acceptance criteria has been exceeded for 386894-93 for Pb and Zn. Therefore, a triplicate result has been issued as laboratory sample number 386894-109.
  - The triplicate results have been assessed against the SAC.

Lab Report MGG0474:

- Spike recovery was outside routine acceptance criteria (60-140%), this may be due to suspected non-homogeneity and/or matrix interference effects. However, an acceptable recovery was achieved for the LCS.
- The laboratory duplicate RPD was outside routine acceptance criteria, this may be due to suspected sample non-homogeneity.

Lab Report 387235:

- For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).
- TRH Water(C10-C40) NEPM - The positive result in the rinsate sample is due to a single peak with no hydrocarbon profile that is consistent with the use of plastic containers.

C. DATA QUALITY SUMMARY

JKE is of the opinion that the data are adequately precise, accurate, representative, comparable and complete to serve as a basis for interpretation to achieve the investigation objectives.

Non-conformances were reported for some field QA/QC samples and laboratory QA/QC analysis. These non-conformances were considered to be sporadic and minor, and were not considered to be indicative of systematic sampling or analytical errors. On this basis, these non-conformances are not considered to materially impact the report findings.

There was only one groundwater monitoring event undertaken for the investigation. On this basis there is some uncertainty around the representativeness of the groundwater data, particularly during different climatic conditions and after wet/dry periods. However, given the low contaminant concentrations reported, the site history and the surrounding land uses, this is not considered to alter the conclusions of the investigation.

Appendix H: Field Work Documents

JKEnvironments

WATER QUALITY METER CALIBRATION FORM

Client: NSW Health Infastructure			
Project: Proposed Rouse Hill Hospital - Hospital Site			
Location: Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW			
Job Number: E37757B			
DISSOLVED OXYGEN			
Make: YSI 1	Model: /		
Date of calibration: 21/07/25	Name of Calibrator: CB		
Span value: 70% to 130%			
Measured value: 108.4 %			
Measured reading Acceptable (Yes/No):			
pH			
Make: YSI 1	Model: /		
Date of calibration: 21/07/25	Name of Calibrator: CB		
Buffer 1: Theoretical pH = 7.01± 0.01	Expiry date: 10/25	Lot No: C291024	
Buffer 2: Theoretical pH = 4.01± 0.01	Expiry date: 01/26	Lot No: D0040225	
Measured reading of Buffer 1: 7.09			
Measured reading of Buffer 2: 4.07			
Slope: /	Measured reading Acceptable (Yes/No):		
EC			
Make: YSI 1	Model: /		
Date: 21/07/25	Name of Calibrator: CB	Temperature: 15.2 °C	
Calibration solution: Rowe - Conductivity Solution	Expiry date: 8/25	Lot No: CB130824	
Theoretical conductivity at temperature (see solution container): 1143 µS/cm			
Measured conductivity: 1180 µS/cm	Measured reading Acceptable (Yes/No):		
REDOX			
Make: YSI 1	Model: /		
Date of calibration: 21/07/25	Name of Calibrator: CB		
Calibration solution: Hanna Instruments	Expiry date: 01/26	Lot No: 0675	
Theoretical redox value: 240mV			
Measured redox reading: 240.3 mV	Measured reading Acceptable (Yes/No):		

JKEnvironments

Client:	NSW Health Infastructure	**Job No.:**	E37757B
Project:	Proposed Rouse Hill Hospital - Hospital Site	**Well No.:**	MW1
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW	**Depth (m):**	7.3

WELL FINISH DETAILS

	Gatic Cover ☐	**Standpipe** ☒ broken standpipe ↳ fixed on 23/7/25 new pipe 0.9m	**Other (describe)** ☐

WELL DEVELOPMENT DETAILS 23/7/25

Method:	Bailer	**SWL – Before (m):**	6.89m
Date:	22/7/25	**Time – Before:**	11.10am
Undertaken By:	CB	**SWL – After (m):**	dry
Total Vol. Removed:	3L	**Time – After:**	11.50am
PID Reading (ppm):	0.0		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	SWL	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
2		19.9	1.84	2041	6.65	-169.7
3	dry	20.1	0.67	2047	6.62	-142.1
Well fixed on 23/07/25 & 15L water introduced to clean it out						
PID: 0.0 SWL: 6.47						
↳ 15L water pumped out → well clean						
↳ well dry						

Comments: Odours (YES) / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: 1

- organic odour & very silty / dirty -> clean after second pump out

Tested By:	CB
Date Tested:	22/7/25
Checked By:	VB
Date:	9.09.25

Remarks:

- Steady state conditions
- Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry

JKEnvironments

Client:	NSW Health Infastructure	Job No.:	E37757B
Project:	Proposed Rouse Hill Hospital, Hospital Site	Well No.:	MW4
Location:	Cnr Windsor Rd. & Commercial Rd, Rouse Hill, NSW	Depth (m):	7.24

WELL FINISH DETAILS

	Gatic Cover ☐	Standpipe ☒ 0.6	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Devel. pump	SWL – Before (m):	3.21m
Date:	22/07/25	Time – Before:	8.30am
Undertaken By:	CB	SWL – After (m):	dry
Total Vol. Removed:	15L	Time – After:	8.50am
PID Reading (ppm):	0.0		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	SWL	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
5		19.3	3.31	712	6.63	11.6
10		19.2	3.57	661	6.04	11.6
15	dry	19.4	3.32	663	5.87	29.8

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: 1

- silty

Tested By:	CB
Date Tested:	22/07/25
Checked By:	VB
Date:	9.09.25

Remarks:

- Steady state conditions
- Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry

JKEnvironments

Client:	NSW Health Infastructure	Job No.:	E37757B
Project:	Proposed Rouse Hill Hospital, Hospital site	Well No.:	MW6
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill NSW	Depth (m):	8.87

WELL FINISH DETAILS

	Gatic Cover ☐	Standpipe ☒ 0.7m	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Develop pump	SWL – Before (m):	3.87m
Date:	22/07/25	Time – Before:	9.20 am
Undertaken By:	CB	SWL – After (m):	dry
Total Vol. Removed:	15L	Time – After:	9.40am
PID Reading (ppm):	0.0		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	SWL	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
5		18.6	3.23	1050	6.74	-41.7
10		19.2	2.16	764	6.30	4.1
15	dry	19.2	1.80	818	5.83	55.9

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: 1

silty

Tested By:	CTS	**Remarks:**
Date Tested:	22/7/25	- Steady state conditions - Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown - Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Checked By:	VB	
Date:	9.09.25	

JKEnvironments

Client:	NSW Health Infastructure	**Job No.:**	E37757B
Project:	Proposed Rouse Hill Hospital - Hospital site	**Well No.:**	MW102
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW	**Depth (m):**	8.53

WELL FINISH DETAILS

	Gatic Cover ☐	Standpipe ☒ 1.10m	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development pump	**SWL – Before (m):**	1.55m
Date:	22/07/25	**Time – Before:**	8am
Undertaken By:	CB	**SWL – After (m):**	dry
Total Vol. Removed:	35L	**Time – After:**	8.25am
PID Reading (ppm):	0.0		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	SWL	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
0.5	1.82	16.7	3.33	1406	6.25	210.4
5	—	19.9	0.55	5400	6.25	22.1
10	—	20.0	0.50	4670	6.49	6.8
15	—	19.8	0.89	3037	6.47	12.6
20	—	19.6	2.04	2887	6.32	37.3
25	—	19.3	2.43	2870	6.33	42.4
30	—	19.2	2.51	2831	6.34	45.7
35	dry	19.3	11.11	2855	6.70	63.1

Comments:Odours (YES / (NO)) NAPL/PSH (YES / (NO)) Sheen (YES / (NO)) Steady State Achieved (YES / (NO))
YSI Used: 1

- silty

Tested By:	CB	**Remarks:**
Date Tested:	22/7/25	- Steady state conditions - Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown - Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Checked By:	VB	
Date:	9.09.25	

JKEnvironments

Client:	NSW Health Infastructure	Job No.:	E37757B
Project:	Proposed Rouse Hill Hospital - Hospital Site	Well No.:	MW103
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW	Depth (m):	2m

WELL FINISH DETAILS

	Gatic Cover ☐	Standpipe ☒ 0.8m	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Develop. pump	SWL – Before (m):	5.08m
Date:	22/7/25	Time – Before:	9.45am
Undertaken By:	CB	SWL – After (m):	dry
Total Vol. Removed:	13L	Time – After:	10.05am
PID Reading (ppm):	0.0		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	SWL	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
5	–	18.9	3.48	6076	6.74	35.1
10	–	19.5	1.99	5606	6.76	37.7
13	dry	19.5	1.27	5356	6.71	43.4

Comments: Odours (YES / (NO)), NAPL/PSH (YES / (NO)), Sheen (YES / (NO)), Steady State Achieved (YES / (NO))

YSI Used: 1

- silty

Tested By:	CB
Date Tested:	22/7/25
Checked By:	VB
Date:	9.09.25

Remarks:

- Steady state conditions
- Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry

JKEnvironments

Client:	NSW Health Infastructure	Job No.:	E37757B
Project:	Proposed Rouse Hill Hospital, Hospital site	Well No.:	MW109
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW	Depth (m):	8m

WELL FINISH DETAILS

	Gatic Cover ☐	Standpipe ☒ 0.15m	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Develop. pump	SWL – Before (m):	4.14m
Date:	22/07/25	Time – Before:	855am
Undertaken By:	CB	SWL – After (m):	dry
Total Vol. Removed:	15L	Time – After:	9.15am
PID Reading (ppm):	0.0		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	SWL	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
5		17.3	2.33	3307	6.77	-54.9
10		18.6	0.51	2706	6.90	-73.3
15	dry	18.6	0.28	2773	6.95	-82.5
	↓					

Comments: Odours (YES / (NO)), NAPL/PSH (YES / (NO)), Sheen (YES / (NO)), Steady State Achieved (YES / (NO))

YSI Used: 1

• Silty

Tested By:	CB
Date Tested:	22/7/25
Checked By:	VB
Date:	9.09.25

Remarks:

- Steady state conditions
- Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry

JKEnvironments

WATER QUALITY METER CALIBRATION FORM

Client:	NSW Health Infastructure		
Project:	Proposed Rouse Hill Hospital - Hospital Site		
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW		
Job Number:	E37757B		
DISSOLVED OXYGEN			
Make: YSI (Airmet)		Model: Pro Plus	
Date of calibration: 29/07/25		Name of Calibrator: CB	
Span value: 70% to 130%			
Measured value: 104.7%			
Measured reading Acceptable (Yes/No):			
pH			
Make: YSI (Airmet)		Model: Pro Plus	
Date of calibration: 29/07/25		Name of Calibrator: CB	
Buffer 1: Theoretical pH = 7.01± 0.01		Expiry date: 10/25	Lot No: CC291024
Buffer 2: Theoretical pH = 4.01± 0.01		Expiry date: 12/25	Lot No: CS021224
Measured reading of Buffer 1: 6.98			
Measured reading of Buffer 2: 3.89			
Slope: /		Measured reading Acceptable (Yes/No):	
EC			
Make: YSI (Airmet)		Model: Pro Plus	
Date: 29/07/25	Name of Calibrator: CB		Temperature: 14.8 °C
Calibration solution: Rowe Scientific Cond. Solution		Expiry date: 10/24	Lot No: CW161024
Theoretical conductivity at temperature (see solution container): 1143 µS/cm			
Measured conductivity: 1190 µS/cm		Measured reading Acceptable (Yes/No):	
REDOX			
Make: YSI (Airmet)		Model: Pro Plus	
Date of calibration: 29/07/25		Name of Calibrator: CB	
Calibration solution: Hanna Instruments		Expiry date: 6/25	Lot No: 0675
Theoretical redox value: 240mV			
Measured redox reading: 240.1 mV		Measured reading Acceptable (Yes/No):	

JKEnvironments

Client:	NSW Health Infastructure	Job No.:	E37757B
Project:	Proposed Rouse Hill Hospital - Hospital Site	Well No.:	MW1
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill NSW	Depth (m):	7.3

WELL FINISH

Gatic Cover		Standpipe	0.9		Other (describe)
	X				

WELL PURGE DETAILS:

Method:	Peri pump / bailer	SWL – Before:	6.40
Date:	29/07/25	Time – Before:	9.50am
Undertaken By:	CB	Total Vol Removed:	0.75L
Pump Program No:	lowest setting	PID (ppm):	0.1

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
0	6.53	0.25		19.8	1.76	2234	6.76	+118.9
4	–	0.5		20.9	5.87	1302	6.80	+210.6
8	6.96	0.75		20.7	4.69	1292	6.86	+246.0
			started sampling					

Comments: Odours (YES) / NO), NAPL/PSH (YES / (NO)), Sheen (YES / (NO)), Steady State Achieved (YES / (NO))
Sampling Containers Used: 2x glass amber, 4x BTEX vials, 1x HNO3 plastic, x H2SO4 plastic, 1x unpreserved plastic → PFAS
YSI used:
YSI (Airmet) – Pro plus

very silty, organic odour

Tested By:	CB
Date Tested:	29/07/25
Checked By:	VB
Date:	9.09.25

Remarks:
- Steady state conditions
- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown

JKEnvironments

Client:	NSW Health Infastructure	Job No.:	E37757B
Project:	Proposed Rouse Hill Hospital - Hospital Site	Well No.:	MW4
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW	Depth (m):	7.24

WELL FINISH

Gatic Cover		Standpipe	06		Other (describe)
	X				

WELL PURGE DETAILS:

Method:	Peri pump	SWL – Before:	3.25m
Date:	29/07/25	Time – Before:	3pm
Undertaken By:	CB	Total Vol Removed:	10.8L
Pump Program No:	/	PID (ppm):	00

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
0	3.37	0.25	pump on h. setting	18.8	2.64	1314	5.71	115.5
4	3.78	2.0		19.3	2.55	1274	5.40	101.6
8	4.05	4.0		19.1	3.08	1236	5.28	87.4
12	4.42	6.0		19.1	3.06	1238	5.28	87.6
16	4.89	8.0		19.2	2.89	1242	5.26	88.8
20	5.53	10.0	pump slowed	19.1	2.49	1247	5.17	95.8
24	5.66	10.25		18.5	2.05	1238	5.21	99.2
28	5.75	10.5	pump on lowest setting	18.0	1.89	1231	5.30	105.3
32	5.81	10.6		17.7	1.82	1223	5.29	101.8
34	5.86	10.7		17.7	1.79	1221	5.30	101.8
36	5.92	10.8		17.6	1.79	1219	5.29	100.9
			started sampling					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)
Sampling Containers Used: 2x glass amber, 4x BTEX vials, 1 x HNO3 plastic, x H2SO4 plastic, 1 x unpreserved plastic → pfas
YSI used:
YSI (Airmet) - Pro plus

Tested By:	CB
Date Tested:	29/07/25
Checked By:	VB
Date:	9.09.25

Remarks:
- Steady state conditions
- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown

JKEnvironments

Client:	NSW Health Infastructure	Job No.:	E37757B
Project:	Proposed Rouse Hill Hospital - Hospital site	Well No.:	MW6
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW	Depth (m):	8.87

WELL FINISH

Gatic Cover		X	Standpipe 0.7		Other (describe)

WELL PURGE DETAILS:

Method:	Peri pump	SWL – Before:	3.86
Date:	29/07/25	Time – Before:	12.40 pm
Undertaken By:	CB	Total Vol Removed:	7 OL
Pump Program No:	/	PID (ppm):	0.3

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
0	4.00	0.25	pump on m-h setting	18.9	4.65	933	5.59	-164.3
4	4.31	1.5		19.0	3.31	930	5.60	-167.6
8	4.57	3.0		19.3	3.03	945	5.64	-169.9
12	4.82	4.5		19.4	2.60	1002	5.86	-175.6
16	5.06	6.0	pump slowed	19.6	2.24	1068	6.04	-183.1
20	5.07	6.25	slightly slowed	19.3	1.99	1114	6.14	-189.5
24	5.07	6.5		19.3	1.84	1152	6.20	-193.3
28	5.07	6.75		19.3	1.82	1167	6.21	-193.7
32	5.07	7.00		19.2	1.78	1162	6.22	-194.0
			started sampling					

Comments: Odours (YES (NO)) NAPL/PSH (YES (NO)), Sheen (YES (NO)), Steady State Achieved (YES) NO)
Sampling Containers Used: 2 x glass amber, 4 x BTEX vials, 1 x HNO3 plastic, x H2SO4 plastic, 1 x unpreserved plastic + pfas
YSI used:
YSI (Airmet) - Pro plus

WOUP2 - #3 + pfas + vocs

Tested By:	CB
Date Tested:	29/07/25
Checked By:	VB
Date:	9.09.25

Remarks:
- Steady state conditions
- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown

JKEnvironments

Client:	NSW Health Infastructure	Job No.:	E37757B
Project:	Proposed Rouse Hill Hospital - Hospital Site	Well No.:	MW102
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW	Depth (m):	8.53

WELL FINISH

Gatic Cover		Standpipe	1.10	Other (describe)

WELL PURGE DETAILS:

Method:	Peri pump	SWL – Before:	1.53
Date:	29/07/25	Time – Before:	8.40am
Undertaken By:	CB	Total Vol Removed:	7.25
Pump Program No:	-	PID (ppm):	0.0

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
0	-	0.5	pump on high setting	16.8	7.18	3395	6.54	-123.2
4	2.16	1.5		17.8	2.21	3290	6.79	-141.1
8	2.37	2.5		18.1	2.15	3278	6.77	-133.6
12	2.60	3.5		18.5	2.41	3217	6.73	-116.2
16	2.81	4.5		18.7	2.42	3198	6.72	-11.4
20	1.98	5.5		18.8	2.07	2995	6.49	-121.3
24	3.08	6.5	pump slowed	18.7	1.86	3017	6.51	-126.3
28	2.97	6.75		18.2	1.85	2975	6.53	-126.9
32	2.97	7.00		18.5	1.84	3006	6.53	-126.4
36	2.97	7.25		18.5	1.85	3013	6.54	-125.4
			started sampling					

Comments: Odours (YES / (NO)), NAPL/PSH (YES / (NO)), Sheen (YES / (NO)), Steady State Achieved (YES / NO)
Sampling Containers Used: 2 x glass amber, 4 x BTEX vials, | x HNO3 plastic, ` x H2SO4 plastic, / x unpreserved plastic + pfas
YSI used:
YSI (Airmd)-Pro PLUS
WQUP1 `#3, voc + pfas

Tested By:	CB
Date Tested:	29/07/25
Checked By:	VB
Date:	9.09.25

Remarks:
- Steady state conditions
- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown

JKEnvironments

Client:	NSW Health Infastructure	Job No.:	E37757B
Project:	Proposed Rouse Hill Hospital - Hospital Site	Well No.:	MW103
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW	Depth (m):	8

WELL FINISH

Gatic Cover		Standpipe 0.8		Other (describe)
	X			

WELL PURGE DETAILS:

Method:	Peri pump	SWL – Before:	6.23
Date:	29/07/25	Time – Before:	11.00am
Undertaken By:	CB	Total Vol Removed:	
Pump Program No:	lowest level	PID (ppm):	0.1

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
0		0.25	pump on - setting J	19.9	7.66	2926	7.12	-138.5
4	6.40	0.75		20.3	4.19	6029	6.97	-166.5
8	6.47	1.25		20.0	2.11	6475	6.91	-181.7
12	6.58	1.75	pump slowed	20.1	2.19	6479	6.90	-121.0
16	6.62	2.00	pump on lowest setting J	20.2	2.18	6415	6.90	-161.8
20	6.64	2.10	pump speed up	20.3	2.27	6412	6.90	-163.2
24	6.78	2.5		19.5	3.26	5941	6.90	-142.1
28	6.91	3.0		19.2	4.11	5523	6.90	-129.0
32	7.04	3.5	pump lowest setting J	19.0	4.48	5335	6.90	-121.8
36	7.08	3.6		19.1	4.01	5311	6.90	-121.4
40	7.10	3.7		18.9	4.08	5281	6.90	-120.3
42	7.12	3.8		18.8	4.17	5286	6.90	-120.2
			started sampling J					

Comments: Odours (YES / (NO)), NAPL/PSH (YES / (NO)), Sheen (YES / (NO)), Steady State Achieved (YES) / NO)
Sampling Containers Used: 2 x glass amber, ' ' x BTEX vials, 1 x HNO3 plastic, 1 x H2SO4 plastic, 1 x unpreserved plastic + 0 Pas
YSI used:
YSI (Airmet) - pro plus

Tested By:	CB
Date Tested:	
Checked By:	VB
Date:	9.09.25

Remarks:
- Steady state conditions
- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown

JKEnvironments

Client:	NSW Health Infastructure	Job No.:	E37757B
Project:	Proposed Rouse Hill Hospital - Hospital Site	Well No.:	MW109
Location:	Cnr Windsor Rd & Commercial Rd, Rouse Hill NSW	Depth (m):	8

WELL FINISH

Gatic Cover	X	Standpipe 0.15		Other (describe)

WELL PURGE DETAILS:

Method:	Peri pump	SWL – Before:	3.95
Date:	29/07/25	Time – Before:	1.50pm
Undertaken By:	CB	Total Vol Removed:	13.45L
Pump Program No:	-	PID (ppm):	0.3

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
0	4.08	0.25	pump on m-h speed	18.1	2.77	3148	7.13	169.3
4	4.40	1.5		18.2	0.20	3243	7.08	339.6
8	4.69	3.0		18.2	0.01	3195	7.07	344.6
12	4.92	4.5		18.3	0.05	3166	7.07	341.5
16	5.16	6.0		18.2	0.72	3089	7.08	178.2
20	5.43	7.5	pump slowed	18.3	0.92	3087	7.08	163.7
24	5.46	7.75	pump speed-vs	17.9	0.88	3051	7.08	157.9
28	5.74	9.25		18.3	0.90	3081	7.08	169.8
32	6.0	10.75		18.4	0.50	3104	7.08	211.5
36	6.27	11.25		18.4	0.36	3136	7.08	241.1
40	6.45	12.75	pump slowed	18.4	0.32	3157	7.08	253.9
44	6.55	13.25	pump lowest setting	18.0	0.15	3162	7.07	298.8
48	6.62	13.35		17.7	0.18	345	7.08	242.1
52	6.66	13.45		17.6	0.21	3147	7.08	237.8
			started sampling					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)
Sampling Containers Used: 2 x glass amber, 4 x BTEX vials, 1 x HNO3 plastic, x H2SO4 plastic, 1 x unpreserved plastic - pjas
YSI used:
YSI (Aimet) - Pro plus

Tested By:	CB
Date Tested:	29/07/25
Checked By:	VB
Date:	9.09.25

Remarks:
- Steady state conditions
- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown

JKEnvironments

PID FIELD CALIBRATION FORM

Client: NSW Health Infastructure			
Project: Proposed Rouse Hill Hospital - Hospital Site			
Location: Cnr Windsor Rd & Commercial Rd, Rouse Hill, NSW			
Job Number: E37757B			
PID			
Make: Honeywell	Model: MiniRAE Lite+	Unit: 3	Date of last factory calibration: 19/12/25
Date of calibration: 21/07/25		Name of Calibrator: CB	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 100.4 ppm		Error in measured reading: ± 0.4 ppm	
Measured reading Acceptable (Yes/No):			
PID			
Make: Honeywell	Model: MiniRAE Lite+	Unit: 4	Date of last factory calibration: 28/01/25
Date of calibration: 21/07/25		Name of Calibrator: AD	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 100.4 ppm		Error in measured reading: ± 0.4 ppm	
Measured reading Acceptable (Yes/No):			
PID			
Make: Honeywell	Model: MiniRAE Lite+	Unit: 4	Date of last factory calibration: 28/01/25
Date of calibration: 21/07/25		Name of Calibrator: AD	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 100.4 ppm		Error in measured reading: ± 0.4 ppm	
Measured reading Acceptable (Yes/No):			
PID			
Make: Honeywell	Model: MiniRAE Lite+	Unit: 3	Date of last factory calibration: 19/12/25
Date of calibration: 22/07/25		Name of Calibrator: CB	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 100.4 ppm		Error in measured reading: ± 0.4 ppm	
Measured reading Acceptable (Yes/No):			
PID			
Make: Honeywell	Model: MiniRAE Lite	Unit: 3	Date of last factory calibration: 19.2.25
Date of calibration: 29/07/25		Name of Calibrator: CB	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 100.1 ppm		Error in measured reading: ± 0.1 ppm	
Measured reading Acceptable (Yes/No):			

Multi Parameter Water Meter

Instrument YSI Quatro Pro Plus
Serial No. 11K101257

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper	✓	
	Settings	✓	
Software	Version	✓	
Data logger	Operation	✓	
Download	Operation	✓	
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00 (pH)		pH 7.00		441789	7.00
2. pH 4.00 (pH)		pH 4.00		443801	3.92
3. ORP (mV)		237.96		434482/435258	237.1
4. EC (µS/cm)		2760		442541	2767
5. D.O		100ppm		432901	-0.1%
6. Temp (°C)		18.2		MultiTherm	18.1

Calibrated by: Sara Angelini

Calibration date: 25/07/2025

Next calibration due: 24/08/2025

Appendix I: Guidelines and Reference Documents

Acid Sulfate Soils Management Advisory Committee (ASSMAC), (1998). Acid Sulfate Soils Manual

Australian and New Zealand Governments (ANZG), (2018). Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia

Canadian Council of Ministers of the Environment, (1999). Canadian soil quality guidelines for the protection of environmental and human health: Benzo(a)Pyrene (1997)

CRC Care, (2011). Technical Report No. 10 – Health screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document

Contaminated Land Management Act 1997 (NSW)

Department of Land and Water Conservation, (1997). 1:25,000 Acid Sulfate Soil Risk Map Series

Heads of EPAs Australia and New Zealand (HEPA), (2025). PFAS National Environmental Management Plan Version 3.0 - 2025

Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land (1998)

National Health and Medical Research Council (NHMRC), (2021). National Water Quality Management Strategy, Australian Drinking Water Guidelines 2011

NSW Department of Environment and Conservation, (2007). Guidelines for the Assessment and Management of Groundwater Contamination

NSW EPA, (2014). Waste Classification Guidelines - Part 1: Classifying Waste

NSW EPA, (2015). Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997

NSW EPA, (2017). Guidelines for the NSW Site Auditor Scheme, 3rd Edition

NSW EPA, (2020). Consultants Reporting on Contaminated Land, Contaminated Land Guidelines

NSW EPA, (2022). *Sampling design part 1 - application*, Contaminated Land Guidelines

National Environment Protection Council (NEPC), (2013). National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013)

Olszowy, H., Torr, P., and Imray, P., (1995). Trace Element Concentrations in Soils from Rural and Urban Areas of Australia. Contaminated Sites Monograph Series No. 4. Department of Human Services and Health, Environment Protection Agency, and South Australian Health Commission

Protection of the Environment Operations Act 1997 (NSW)

State Environmental Planning Policy (Resilience and Hazards) 2021 (NSW)

World Health Organisation (WHO), (2008). Petroleum Products in Drinking-water, Background document for the development of WHO Guidelines for Drinking Water Quality

Western Australia Department of Health, (2021). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia